

Logic and the Limits of Philosophy in Kant and Hegel

CLAYTON BOHNET



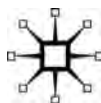
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Clayton Bohnet
Fordham University, USA

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List of Abbreviations

Works of Immanuel Kant

- CPR *Critique of Pure Reason*, trans. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998)
- JL *Jäsche Logic*, in Kant, *Lectures on Logic*, trans. and ed. J. Michael Young (Cambridge: Cambridge University Press, 1992)
- DW *Dohna-Wundlacken Logic*, in Kant, *Lectures on Logic*, trans. and ed. J. Michael Young (Cambridge: Cambridge University Press, 1992)
- VL *Vienna Logic*, in Kant, *Lectures on Logic*, trans. and ed. J. Michael Young (Cambridge: Cambridge University Press, 1992)
- BL *Bloomberg Logic*, in Kant, *Lectures on Logic*, trans. and ed. J. Michael Young (Cambridge: Cambridge University Press, 1992)
- H *Heschel Logic*, in Kant, *Lectures on Logic*, trans. and ed. J. Michael Young (Cambridge: Cambridge University Press, 1992)
- NF *Notes and Fragments*, ed. Paul Guyer, trans. Curtis Bowman et al. (Cambridge: Cambridge University Press, 2005)

References made to the *Critique of Pure Reason* utilize the standard A/B pagination. References to the remaining texts include the page numbers of Kant's *gesammelte Schriften* followed by page numbers of the above translations.

Works of George Wilhelm Friedrich Hegel

- D *The Difference between Fichte's and Schelling's System of Philosophy*, trans. J. P. Surber (Atascadero: Ridgeview Press, 1977)
- FK *Faith and Knowledge*, trans. H. S. Harris and Walter Cerf (Albany: State University of New York Press, 1977)
- SL *Science of Logic*, trans. A. V. Miller (Atlantic Highlands: Humanities Press International, 1989)
- EL *Encyclopedia Logic*, trans. William Wallace (Oxford: Oxford University Press, 1975)
- LL *Lectures on Logic*, trans. Clark Butler (Indianapolis: Indiana University Press, 2008)
- PS *Phenomenology of Spirit*, trans. A. V. Miller (Oxford: Oxford University Press, 1977)

References to Hegel's works include the reference to the *Gesammelte Werke* followed by the page numbers to the above translations.

Introduction: Kant, Hegel, and the Nature of Logic

(1) Theoretical overview

Truth is a matter of peculiar disciplinary significance for both philosophers and logicians. Of course, every science and inquiry seeks to say something true about 'what is'. Theologians, scientists, and artists seek to discern the true, whether this truth concerns the highest being, the nature of depression, or social justice, and so forth. The logician and the philosopher, however, are unique in their efforts to mark out the conditions of truth. They both share the tasks of determining the boundaries of intelligibility, separating formal from material conditions of truth, and striving for a language of utmost precision. Both disciplines are thus concerned, in contrast to the particular sciences and arts, with conditions by which truth happens.

Yet throughout the history of Western philosophy, the significant differences between philosophy and logic have been shown to justify the institution of strict disciplinary boundaries between them. Historically, philosophy has been afforded an exalted status correlating to the perceived expansiveness of its domain compared to that of logic. Philosophy takes up topics and questions that are well beyond the purview of logic. Questions about the nature of justice, time, or the soul, for example, are external to the domain of logic. From within the tradition it is not controversial to say that all that is included in logic can be included in philosophy, but not all that can be included in philosophy can be included in logic. Philosophy is held to be the larger, more encompassing, and sometimes the more dignified discipline, leaving logic as either a part of philosophy or something prior to philosophy all together.

Logic, following the scholastic appropriation of Aristotle, has been conceived as a 'propaedeutic' for knowledge in general. This tradition is

reflected in the typical conception of the education process: a student takes courses in logic, which prepares them for rigorous engagement with the sciences or the humanities. This process that begins in logic passes through the sciences and ultimately culminates in philosophy. Philosophy as the culmination of knowledge is a discipline markedly other than the discipline of logic. As a challenge to this traditional order, some philosophers in the 20th century have held that the work of the logician and the work of the philosopher overlap without remainder. In fact, with analytic philosophy broadly construed comes the rejection of many of the perennial questions that traditionally populated philosophical research. Questions regarding the purpose of the universe, the nature of the soul, the attributes of God are taken as flights of speculation, pseudo-questions that are ultimately unintelligible. Precisely those subjects of inquiry that used to distinguish philosophy from logic are dismissed as chimerical. Analytic philosophy with its emphasis on a clear and precise language as well as its vision of philosophy lends itself to a very useful role in our contemporary scientific-technological world. Yet, the increasing popularity of the vision of philosophy proffered by analytic philosophy should not cause us to forget the nuanced commitments of the historical tradition it challenges. In fact, it is perhaps only by attending to the tradition and its prejudices that the novelty of analytic philosophy can be assessed.

According to this tradition, because philosophy and logic are both interested in the conditions of truth, they share a kinship more intimate than with any other forms of knowledge. Part of what distinguishes logic and philosophy from other disciplines is the universality of their 'object'. Chemistry informs us about the nature of a particular object, just as linguistics does. The knowledge of the chemist or the linguist is based on an acquaintance with a particular set of objects and not others. However, the chemist, as chemist, knows nothing of the realm of objects about which the linguist, as linguist, has knowledge, and vice versa. In contrast, the disciplinary boundary between logic and philosophy is more complex precisely because of the shared concern for the principles of knowledge in general. Logic in its inquiry seeks to state the truth conditions for any knowledge, whether of chemistry, math, or linguistics. Philosophy seeks to interrogate the basic principles and assumptions of any and every inquiry, whether of physics, biology, or art. There is in the disciplines of philosophy and logic a shared concern for conditions universal to all forms of inquiry.

What, then, is an adequate understanding of the disciplinary boundary between philosophy and logic? Analytic philosophy would as it were

erase the difference between them; logic and philosophy name the same disciplinary activity. Traditionally, the disciplines of philosophy and logic are similar in their concern for truth and in the universality of their inquiry, yet they are also conceived of as different in respect to the breadth of their domains and their purpose in institutional systems of knowledge. To go further in this inquiry into the traditional inscription of the disciplinary boundary between philosophy and logic, we must take up some of the particular figures emblematic of that tradition.

Immanuel Kant and G. W. F. Hegel are two of the most provocative thinkers in the history of philosophy, and both made significant contributions to the history of logic. Although their major works are separated by only 30 years, they provide those interested in the history and philosophy of logic two radically distinct approaches to the subject matter of logic. This difference is manifest in the way they define logic, how they situate logic in relation to other disciplines, and their respective treatments of concepts, judgments, and inferences. What makes their works especially informative for clarifying the disciplinary boundary between logic and philosophy is the fact that their specific approaches to logic are informed by larger philosophical commitments, which cannot be understood by reference to their writings on logic alone. An interpretation of the difference between Kant and Hegel in how they understand the discipline of logic and its relation to philosophy must at the same time be an interpretation of the difference in their overall philosophical standpoint. Their works on logic and its relation to the rest of possible knowledge constitutes an invaluable historical resource for understanding that out of which the first breath of the analytic tradition emerges.

The focal point for the following analysis of their respective philosophies of logic will be 'quantity.' An examination of Kant's treatment of quantity in general and pure logic, contrasted with his treatment of quantity in transcendental logic, coupled with an analysis of Hegel's reconstruction of the discipline of logic embodied in his treatment of quantity in the *Science of Logic* will allow us to make more general claims about the relation between philosophy and logic in the systems of these two thinkers. 'Quantity' may seem like a capricious choice of subject matter around which to build an analysis of the respective logics of Kant and Hegel, but it is not. The focus on quantity is inspired by important philosophical developments of the later part of the 19th and the whole of the 20th century. First is the work of Edmund Husserl, most specifically in his *Crises of the European Sciences*, in which he traces the genesis of the 'mathematization' of nature. Husserl's analysis

of how a particular world outlook can limit possible experience and knowledge foreshadows Martin Heidegger's own idea of the 'enframing' and nature as 'standing reserve.' For both thinkers, the dominance of the calculable has foreclosed upon a more robust conception of the nature of thought and reduced what can be said intelligibly about the world to the quantifiable. Even the existential phenomenology of Jean-Paul Sartre's *Being and Nothingness* shows that what is quantifiable does not account for the totality of the real, since, for example, what is not present, freedom/the negation of the present, is the condition of the being of the present. Since the difference between the quantifiable and the true or real is bound up with phenomenology's critique of the mathematical-logical framework of logical positivism, the significance of an analysis of the difference between a logical account of quantity and a transcendental one in the major epoch of philosophy prior to late 19th- and 20th-century philosophy is obvious. The second reason for focusing on quantity is the dominance of analytic philosophy in Anglo-American philosophy. Analytic philosophy is a complex and diverse field of research consisting of heterogeneous projects and disparate views, yet one of its most central features is the quantification of logic, language, and knowledge. At the root of analytic philosophy is, perhaps, Gottlob Frege's rejection of Kant's claim that mathematics requires an appeal to intuition for the demonstration of its truths. Frege sought to provide a purely discursive or analytic foundation for math through logic and a purely formal language. The *Begriffsschrift* (1879) represented for Frege a language purged of the ambiguities that haunt natural language, thereby making the logical basis of mathematics evident. Although Ludwig Wittgenstein, Bertrand Russell, Kurt Gödel, and even, at the end of his career, Frege himself recognized the impossibility of this project, their work and the work of logicians/analytic philosophers today continues to inspire new developments in artificial intelligence, computer science, data analysis, medical technology, and so on. Undoubtedly, the quantification of language and the intelligible has had a powerful and dynamic effect on civilization. But it has also had an effect on philosophy. The formalization of intelligibility via extensional-logical analysis is more and more the dominant paradigm for the practice of philosophy. And, more and more, the dominance of this conception of the nature of philosophy is no longer limited to the Anglo-American university. Because of its precision and usefulness for the sciences, analytic philosophy can easily be maintained to be the most popular paradigm for philosophy in the global academy. Quantity is thus not a capricious choice, because for the reasons mentioned

above, it is the problem of quantification that divides 20th-century philosophy into analytic and continental. Quantity is thus used in the following work to build an understanding of the philosophy of logic that historically precedes the revolutionary changes in logic that began with Frege. The hope is that by looking at the nature and place of logic in the philosophies of Kant and Hegel and focusing on their respective treatments of quantity, this work will illuminate some integral aspects of the philosophical background out of which the necessity of modern logic emerges.

The conceptual relation between formal logic and transcendental logic in Kant's theoretical philosophy will be the subject matter of the first part of this work. Analysis will be organized around readings of particular passages of the *Critique of Pure Reason*, the *Prolegomena*, as well as Kant's posthumously published *Logic* and unpublished *Lectures on Logic*. Of particular importance will be those incidences, found in both editions of the first *Critique*, in which Kant defines the nature and project of transcendental logic in direct contrast to formal logic. The introduction to the transcendental logic is especially important, for in it we see Kant introduce and justify the divisions of his 'new' transcendental logic on the basis of the traditional formal logic with which he can assume his reading audience is familiar. Of course, the importance of their similarities for Kant's argument also exposes the importance of their differences. By highlighting the difference that distinguishes transcendental from formal logic, we see the necessity of integrating Kant's discussion of formal logic within the context of his larger philosophical commitments. Kant's denial of intellectual intuition, and his claim that logic is a purely analytic discipline, clarifies the consequences of his critique of speculative metaphysics for his conception of logic. It shows the connection between the necessity of logic, the absence of intellectual intuition in human cognition, and the inability of precritical metaphysics to achieve the status of science. It also makes plain the unbridgeable gulf that separates disciplines involving synthetic a priori cognition and those that are purely analytic. The transcendental time determinations can show how the mathematics and science are possible, but it does not directly show how the 'cognition' of the formal laws of thought (logic) is possible. To understand the gulf between transcendental logic and general and pure logic requires integrating their difference into the whole of Kant's critical system.

The second part of this work focuses on Hegel's *Science of Logic* as sublating the difference between logic and philosophy. Part two begins with an analysis of Hegel's critical reading of Kant in *Faith and Knowledge*

and the *Differenzschrift* to show the way in which he understands his own philosophical project. Both his critique of the Kantian philosophy and his appraisal of his contemporaries reveal the ambition that motivates Hegel's philosophy as a whole and by default his new approach to logic. Hegel's critical reading of Kant is developed in two ways: (1) Hegel is purely critical of Kant as a philosopher trapped in the standpoint of 'reflection,' and (2) Hegel praises Kant for recognizing the necessity of a standpoint beyond reflection (speculation), but criticizes him for not developing this standpoint. The *Science of Logic* is to be the first moment in Hegel's genuine speculative system of philosophy that nondogmatically provides determinate cognitions of the unconditioned. Thus we can see Hegel's novel account of traditional logic in the *Science of Logic* as embedded in a philosophical project of overcoming the epistemological limitations of Kant's critical philosophy. This novelty of Hegel's approach has the following consequences: (1) logic is repositioned within the system of all forms of knowledge and becomes a genuine moment of philosophy proper, and (2) logic is no mere outer courtyard of truth, nor is it purely abstract, but becomes a moment of truth ripe with a content of its own. Within Hegel's mature system, logic is a moment in the determination of the absolute as much as is causality, substance, or teleology. It is as a determination of the absolute that Hegel's treatment of the traditional discipline of logic differs most greatly with the tradition as a whole and most clearly with Kant.

The concluding section of this work provides a summary that brings together the major threads of the analysis as well as gestures toward new lines of research, especially in mathematics and ontology. The difference between transcendental logic and formal logic as it is maintained in Kant is in Hegel sublated, that is, preserved and erased. This annulment of the boundary between what I will argue is first philosophy and logic becomes what I still understand to be one of the most significant points of debate of 20th-century philosophy. Closing remarks are provided that emphasize this point and show the necessity of an interpretation of the 20th-century division between analytic and continental philosophy that is historically grounded. The following introductory discussions aim to reveal the questions and assumptions that frame my work as a whole.

(2) German Idealism and the history of logic

This book does not propose to offer a summary of the philosophy of logic in German Idealism. Precisely because the nature of logic is such an important question in this era of philosophy, there is no consistent

'philosophy of logic' in German Idealism. This book takes as its task the situating of Hegel's critique of Kant in the context of the philosophy of logic. In both Kant and Hegel, the way in which the nature and content of logic is conceived is a reflection of larger more properly philosophical commitments. In fact, these larger philosophical commitments frame the way in which they conceive of the history of logic and how they position logic within the system of all knowledge.

Kant frequently makes the remark that since its inauguration with Aristotle, the discipline of logic has remained substantially unaltered for over two millennia. Hegel too makes such a claim at the beginning of the *Science of Logic*, although the purpose of this remark is radically different than Kant's. Although logic certainly does not have the simplified history that Kant and Hegel assume, if we accept this perspective as a provisional premise, then we see not only how radical the reconstructions of logic have been since Kant and Hegel but also the significance of the changes that both Kant and Hegel introduce into logic for the history of logic.

Perhaps beginning with Gottfried Wilhelm Leibniz and George Boole, but certainly ever since the late 19th century, the discipline of logic has undergone fundamental revision and reconstruction. The substantial nature of the changes that logic has undergone as a discipline is *perhaps* rivaled only by that of physics, biology, and medicine. The substantial change is most apparent in the last century, in which Russell and Alfred North Whitehead's *Principia* and Wittgenstein's *Tractatus* problematized the way in which we have traditionally understood the subject matter, purpose, and method of logic. These changes in logic can be justifiably traced back to the revolutionary work on logic done by Frege.

Frege sought to provide a purely logical-analytic basis for mathematics. He directly criticized the Kantian view that mathematics was synthetic and related fundamentally to intuition, and argued that mathematics rightly conceived should have a purely logical or formal basis. Frege, Giuseppe Peano, and Russell shared the view that in order to develop a purely logical foundation for mathematics, a purely formal language was necessary that would need no appeal to the given, or to Kant's 'intuition.' This language, stripped of the vagaries of 'natural' language, is, if not identical with, at least complementary to what we now know as 'set theory' evolving out of the works of Georg Cantor, Ernst Zermelo and Abraham Fraenkel. The result of this logical, linguistic, and mathematical evolution is the foundational possibility for all the computer programming that our global community and its discontents depend upon. Regardless of its cultural-practical significance, at a purely theoretical

level works on the logical foundations of mathematics brought about a new era in the discipline of logic.

Concurrent with these changes in logic are changes in philosophy, mainly the rise of logical positivism, the Vienna Circle, and analytic philosophy generally. In these movements the task of philosophy is changed. Although containing many complex and conflicting views, these movements can all be said to call into question the traditional philosophical disciplines of metaphysics, ethics, and aesthetics. The insistence on a formal language to perfect the rigors of scientific intelligibility (in reaction against the confusing dialectics of Hegelian Idealism) required the removal of philosophy from the domain of values. For instance, thinkers such as A. J. Ayer, Russell, and the early Wittgenstein claim that inquiries into 'substance,' 'freedom,' or 'beauty' are based on misunderstandings of language. They argue that, through an analysis of language, the bounds of intelligibility can be delimited such that the traditional content of metaphysics is shown to be composed of pseudo-statements. Pseudo-statements fail to meet what the early logical positivists saw as basic criteria of verifiability and hence intelligibility. Members of the Vienna Circle, such as Rudolf Carnap, recognized the necessity of a logical analysis of language as the precondition for the intelligibility of mathematics and the sciences. Based on this analysis, the construction of a purely logical language becomes possible, which constitutes the basic elements and principles of all intelligibility. The task of philosophy is to analyze the conditions of intelligibility and then construct a purely logical and thus transparent language out of which determinate condition of the world is possible. Questions of beauty, the good, and religion are no longer matters of philosophy because the nature of their object is excluded by the positivist epistemology. With caveats, what it means to be a philosopher and what it means to be a logician are no longer different things. Although Willard Van Orman Quine would distance himself from some aspects of the logical positivist paradigm, he is still part of the tradition that recognizes the task of philosophy as providing the foundations for science, that is, neo-Kantianism after the linguistic turn. In the last century, logic and philosophy perhaps for the first time in the history of philosophy become identical.

The foregoing is meant merely to suggest that in the last century and a half there has been a change in logic that is perhaps as significant for civilization as the work of Euclid, Sir Isaac Newton, or Albert Einstein. These changes in logic are concurrent with a reconstruction of the task of philosophy – both continental and analytic philosophy can be seen to be dependent on this transformation of logic. Yet before Frege and

Peano, the epoch of Kant and German Idealism had already altered the discipline of logic. Although these alterations did not center on the problem of number and the complex relation of the discipline of logic to mathematics and language, they did involve some of the basic principles of the discipline and the nature of its relation to philosophy. Thus the work of thinkers such as Kant and Hegel deployed logic in a philosophically novel and historically significant way. It is not the premise of this work that the changes in logic brought about in the era of German Idealism ‘caused’ the changes inaugurated by Frege – although it is undeniable that the reception of Hegel’s *speculative* logic did much to create the confusion Frege sought to clear up. I do, however, take the cultural-intellectual context that thinkers like Frege and Cantor inherit as one in which the nature of logic had come to be a central philosophical concern to a large extent following from the novelties in its respective treatments in Kant and Hegel.

In Kant and Hegel, logic is no longer seen as a fixed or static discipline of no philosophical import. It is seen as something that demands renewed attention, fresh elucidation, and genuine systematization. For instance in Kant’s first *Critique*, the ‘metaphysical deduction’ puts logic to a new use by deducing from it the a priori structure and functions of the mind. Additionally, in the context of the table of judgments, Kant claims to have assembled systematically the functions of judgment that Aristotle had assembled haphazardly (CPR, A81/B107). Hegel’s *Science of Logic* marks the most obvious rupture in the ‘continuous’ history of logic. Hegel conceives of his revolutionary contribution to logic in terms of his argument that logic is not a discipline composed of abstractions antecedent to sufficient determinations of truth. Logic adequately conceived has a material content in itself that differentiates it from other types of knowledge at the same time as it constitutes itself as a type of knowledge. On Hegel’s view, the traditional assumption was that logic was a purely formal analysis of thought and that the content or matter of thought must come to it from without – logic is a necessary but not sufficient condition for truth. Hegel maintains the opposite position because of epistemological-metaphysical commitments that do not make the traditional assumptions. This is most evident in his critique of the principle of noncontradiction, which follows from the novelty of his conception of the relation of truth and being. He argues that the insight into the proper content of logic can only come about from a particular standpoint that he calls *speculative*. What is unique about the speculative standpoint is that it thinks through the different moments of traditional logic according to a new method. This method

recognizes the internal or organic connection between the different moments contained in logic itself and within the whole. Logic is as much a moment of the relation between thought and being as any other. For instance, in Kant the judgment of quality is discussed subsequent to, but in isolation from, the judgment of quantity. There is something abstract, external, or mechanical about the traditional exposition of the distinct moments of logic. In Hegel, any particular moment of knowledge can only be adequately understood if the necessary connection between it and every other moment is also grasped. In this way the treatment of concepts leads organically into the treatment of judgments, just as the treatment of the quantitative judgment leads into that of the qualitative. As the articulation of the absolute, the dialectical process of exposition involved in Hegel's treatment of the traditional terms of logic conceptualizes each moment in its place within the whole, and it is this systemic conceptualization that is in large part the material content proper to logic that the tradition could not grasp. Hegel's radical revision of logic in terms of content and method of exposition has as its ultimate significance the fact that logic is as much a moment in the whole of truth as physics, aesthetics, or theology. It is to a large extent Hegel's speculative dialectic and his argument for the material content of logic that prompted much of both the neo-Kantian movement and the work of Frege himself. But, especially for the latter, Kant's conception of logic and its relation to mathematics also represented a historically salient contribution meriting interrogation and critique.

(3) Logic, thought, and the unconditioned

As suggested above, that there is no consistent 'philosophy of logic' that can be found running from Kant to Hegel shows how important such a philosophy was. The determination of the nature and limits of logic seem to be a constant source of divergence, self-differentiation, or alliance, partnership. Kant's metaphysical deduction and the transcendental logic of the first *Critique* opened up the possibility of thinking about logic in a new way. Thinkers after Kant like Christoph Gottfried Bardili and Karl Leonhard Reinhold emphasized the foundational status of logic, but they differed on what this foundational logic is. In his *Differenzschrift*, Hegel criticizes his post-Kantian contemporaries for reducing a philosophical account of thought to a logical one (D, 88/187). In the *Science of Logic*, Hegel claims to revolutionize the method and content of logic by letting 'spirit' infuse its dead bones, arguing that the logic of his predecessors was abstract, without content, truthless (SL, 37/53). He counters

the reductionism of his contemporaries as well as Kant with a new way of understanding logic and its relation to all forms of knowledge.

Part of the reason why logic is so important for German Idealism is its immediate involvement in questions regarding the nature of thought. If logic is the form or rules of thinking in accordance with which one speaks intelligibly, then it discloses in the system of its rules a determination of the nature of thinking or mind. It is because of logic's immediate proximity to the nature of thought that makes it such an important question for Kant and Hegel, responding as they are to the various threads of modern philosophy organized loosely by the categories of empiricism and rationalism. Thinkers such as René Descartes and Leibniz, John Locke and David Hume broke new ground in terms of a philosophical inquiry into what thought is and how it works. However, without discounting the importance of logic, perhaps the most important question confronting Kant and German Idealism was the relation of thought to the absolute. How is the absolute related to human thought? The way in which they handle this central question structures their philosophical systems and at least indirectly influences their accounts of logic.

In Kant and Hegel, an account of logic is internally related to an account of thought. This internal relation can only be recognized if both the necessity and the inadequacy of external determinations are seen. Understanding the specific difference of logic in contrast with other disciplines is necessary. Distinguishing its method, elements, and disciplinary boundaries in comparison with the determinate sciences, metaphysics, ethics, 'common sense,' and so forth, is a necessary task for a philosophy of logic. Yet, logic in itself is not thus understood. We can circumscribe its territory by differentiating it from the other disciplines, but what it is in itself remains unthought. In Kant and Hegel, the study of logic is the study of the form or rules of thought's agreement with itself, and it is this determination of logic at the level of thought that must be understood if we are to connect their conceptions of logic with their larger philosophical projects. The rules that articulate the form of thought are necessarily going to apply to all instantiations of thought that are intelligible. The question about the nature of logic in itself directly opens into the discussion of the nature of thought in the context of broader epistemological commitments.

To understand what the discipline of logic is, in Kant and Hegel we necessarily involve ourselves in understanding something about the nature of thinking. What is it that shows itself as having these rules? What is thought? How is the necessary form of thought's agreement with itself a reflection of the nature of mind? How is the way in which

we conceive of thought influential for how we think about logic? If we are to understand how Kant and Hegel answer these questions, then we will have to consider not only their discussions of logic but also their discussions of thought.

In the history of philosophy, one way to understand the nature of thinking is to grasp the horizon of its possible acts. As a power, thought, taken independently of its content, has a form, a limit which the rules of logic circumscribe. The power of thought would be further defined by its material content, so that an account of thought would involve distinct capacities reaching from the singularity of perception to the unconditioned universality of the idea. From this perspective, an account of thought's relation to the unconditioned, the absolute, or spirit would be just as essential to an analysis of the powers of mind as an account of perception. If we try to understand logic by reference to thought, we see that to understand thought, we have to understand the full range of thought's objects, including the absolute.

Part of the uniqueness of the epoch of Kant and German Idealism is the philosophical significance given to the relation of thought to the unconditioned. The entire project of the first *Critique* could be construed as showing that the absolute is transcendent of the conditions of objective knowledge. The constitutive use of the ideas of reason results in either the illusions of dogmatism or some form of skepticism. In Hegel, the *Science of Logic* is the immediate stage of the self-determining/unfolding of the absolute. Both Hegel and the early Friedrich Wilhelm Joseph Schelling recognize thought as a movement integrally connected to the process of the unconditioned substance's becoming subject. Hegel's reading of the history of civilization and all of philosophy claims that all knowledge, institutions, and events are governed by the process of the progressive unfolding of the absolute. Thus in his *Science of Logic*, he can argue that the account of the traditional content of logic is not other than the absolute determining itself.

The absolute and its relation to thought is, like logic, a prominent and problematic issue in German Idealism. There is not in fact one 'philosophy of the absolute' that consistently runs like a thread through the thought of those referred to as German Idealists. But in the works of Kant and Hegel, the three topics (logic, thought, and the absolute) are structurally bound together – the account of one implies something about the account of the other. Although it could be argued that in every systematic philosophy the account of each constituent element is connected intrinsically to the accounts of all the others, in Kant and Hegel the relation between thought and the absolute is essential for

illuminating the particularities of their respective conceptions of logic. The relation of thought to the absolute is not the only way to understand the epochal significance of German Idealism or Kant and Hegel specifically. It is, however, (1) among other possible lines of interrogation, one of the most revealing, and (2) essential to understanding the relation of a philosophical account of thought to a philosophic account of logic.

(4) Kant, Hegel, and the unconditioned

The relation of the absolute to thought is decisive for the philosophies of Kant and Hegel because it has implications for the whole of their systems, and thus their conceptions of logic. We have already noted the impossibility of a general characterization of a 'German Idealist philosophy of the absolute.' Despite such difficulties I would like to provide a provisional definition of the absolute, limiting myself to summary interpretations of Kant and Hegel. For the sake of this section, I will be using the words 'unconditioned' and 'absolute' interchangeably.

To begin, for both Kant and Hegel the unconditioned is something about which we think that has traditionally been connected to the content of metaphysics. Whether it is in the discipline of theology with the idea of God or in the form of psychology with the idea of the human soul, the unconditioned is the subject matter of a branch of philosophy that goes beyond the physical. In relation to the powers of thought, the unconditioned is for the most part associated with reason in contrast to the understanding. There are exceptions to this as, for instance, in Hegel we see that the understanding can have a concept of the unconditioned, spurious though it might be. As an object of thought, the unconditioned can be distinguished from other objects of thought. For one, it is not an object determined by time or space. It cannot be 'sensed,' and it is not a matter of observation. The unconditioned is not empirical. It is an object of pure thought, grasped independently of sensation or perception. The idea of the unconditioned is not derived from or abstracted from sense experience, but rather is immanent, even innate in thought. It is precisely as such an object of thought that its relation to all forms of cognition is more intriguing. For both Kant and Hegel, the unconditioned functions within the entire 'field' of cognition – even our cognition of empirical objects is related to the unconditioned. As having such a role in all thought the unconditioned can be identified, especially in Hegel (following Fichte and Schelling), as the activity of thought itself. In Kant, it is through the ideas of reason that cognition

seeks the totality of conditions as an ideal of knowledge. The particular way in which the unconditioned is active in thought clearly differentiates the philosophies of Kant and Hegel and serves to make sense of the differences involved in their respective accounts of logic. The following provides a preliminary account of their respective philosophies of the unconditioned.

In his critique of speculative cognition, Kant claims to reveal the logical illusions involved in all claims to know the unconditioned. In the three speculative sciences, rational psychology, cosmology, and theology, there correspond three forms of the idea of the unconditioned – the soul, the universe, and god. This is the unconditioned not as activity of cognition, but as idea or object of cognition. Each idea represents a distinct way in which the mind thinks the unconditioned. This is not to say that the unconditioned is itself ‘many,’ but that it is present in human reason as thus differentiated. In each case, reason subsumes the totality of conditioned existence or appearances under one unconditioned object, thus seeking in the subsumption a totality. This totality is the idea of reason to which we try to connect the cognition of the understanding. In rational psychology, one tries to trace all the particular appearances that make up inner life back to an original source or totality called the soul. The soul is an idea of the unconditioned under which all the actions and cognitions of the particular self are subsumed by cognition. In a general sense, the same holds true for cosmology and theology: we subsume the series of conditioned appearances under an idea of nature or god. Kant’s critique of speculative philosophy argues that we can never have an intuition of this totality. It is something toward which we strive, but because of the limitations of the human standpoint, we can only at best approximate this total knowledge. Thus, claims to know the unconditioned and to grasp the series of conditioned objects from the standpoint of the totality are illusory. For Kant, the unconditioned cannot be an object of possible cognition/known since it transcends the boundaries of intuition, and thus experience (CPR, A310/B367). Objectively true or false claims about the unconditioned are intrinsically impossible since from the human standpoint what is objectively verifiable has to at least indirectly make reference to intuition limited to the sensible. Statements made about the unconditioned are subjective, and although they can carry conviction they will always remain matters of faith.

To further understand the relation of the unconditioned to thought in Kant, it is important to note the distinction he introduces between the constitutive function of reason and the regulative function of reason. As a

function, the unconditioned is the activity of reason – it is what thought is. He associates dogmatic metaphysics with reason in its constitutive role. To the extent that reason is constitutive, it claims to know something about the unconditioned. It is dogmatic to the extent that it offers a merely logically valid demonstration as a sufficient determination of truth, there being no way to objectively falsify it. Reason in its constitutive role is the seed of speculative illusion, metaphysical excesses. In contrast, reason (as activity of the unconditioned) in its *regulative* role has an essential but purely formal function for thought. The merit of the unconditioned ideas of reason is determined as *schematizing* or organizing our cognition of appearances into the form of a system, based on the three ideas of totality. The idea of the soul regulates our experience of inner life by systematizing it toward an ideal of perfect unity. This unity is never given – it is an ideal that shapes our knowledge, not something that is known. The regulation is a function that operates by systematizing the discrete cognitions of the understanding. Thus for Kant, on the one hand, the ideas of reason are denied an object of their own sufficient for extending our objective knowledge, while on the other hand, the ideas of reason are granted a regulative use that as a power guides our knowledge of appearances toward the unity of a system.

Hegel's model of cognition provides us with an account of thought as the self-regulating/self-expressing activity of the unconditioned (SL, 17–18/39). Hegel claims that reason does have a valid and nondogmatic constitutive use that Kant could not recognize because of his commitment to the critique of dogmatic metaphysics.

Hegel's own model turns on the idea that even what Kant takes as outside objective cognition is no more than a moment in the activity of thinking itself (SL, 15/36 & PS, 85/54). The transcendent nature of the ideas of reason receives such a philosophical determination only from a particular standpoint ripe with its own particular assumptions about knowledge. The way in which Hegel conceives the relation of the unconditioned to thought is key to understanding his critique of the epistemological assumptions anchoring traditional accounts of logic. I read Hegel as suggesting that the correspondence theory of truth is inadequate because its assumption that thought and being are not always already in unity is based on a one-sided and thus inadequate standpoint. Yet Hegel cannot be interpreted as suggesting a return to the precritical metaphysics he describes in the introduction to the *Encyclopedia Logic*. This standpoint has to incorporate the negative work of Kant's critical project.

The *Phenomenology of Spirit* is generally seen to be the propaedeutic part of Hegel's mature system in which through a series of dialectical

stages thought progresses beyond the one-sided determinations of the 'other' of thought. If the actual unity of thought and being is the conclusion of the *Phenomenology* and the beginning of the *Science of Logic*, and the nonunity of thought and being is the assumption of a correspondence theory of truth, then we can assert that Hegel's mature system transcends the epistemological assumptions framed by the idea of thought as form on one side and being as content on the other. If there is no beyond of thought, if there is no other that stands exterior to thought, then the epistemology inherent in a correspondence theory of truth is at least inadequate to understand the *Science of Logic*. This means that the *Phenomenology* is the dialectical progression of overcoming the assumptions that justify or legitimate the correspondence theory of truth.

For Hegel, the *Science of Logic* is to be understood as the exposition or explication of the absolute idea. This very possibility, denied by Kant, is a result of sublating the otherness of thought and its object. What is in Kant transcendent of human cognition, the constitutive use of the faculty of the unconditioned, becomes the *immanent* condition of all adequate cognition. The activity of thinking is the immanence of the unconditioned, and its valid content is the process of its exhaustive analysis or explication of its systematic interconnection with all other determinate cognition. What is immanent in Kant, the regulative use of the faculty of the unconditioned is also immanent in Hegel's system. Reason, as that which results from the *Phenomenology*, is at once constitutive and regulative; it is the sublated unity of what had remained fixed and opposed in Kant's philosophy, for example: freedom and truth (SL, 15–16/37). This means that the unconditioned is an object of reason, and that it is also the very activity of reason. What it is that thought thinks when it thinks itself is the systematic exposition of the fundamental syntheses/unities of thought and being. The unconditioned as activity of thought is not licensed only in its purely formal role of directing us toward an ideal we can never attain, but in its self-explication the *a priori* form of unity is the content of the unconditioned.

This means that in Hegel's philosophy, the unconditioned is not only one branch of our knowledge (metaphysics) but is also the immanent condition and content of all cognition. The unconditioned is not separate from any particular determination – a thought that posited or assumed such a separation has yet to truly grasp the determinate adequately. Thus the standpoint that Kant claimed was transcendent of human knowledge becomes the immanent condition of human knowledge in Hegel. This changes drastically how we conceive of the task of philosophy: now, the task of philosophy is to recognize the order that

subsumes all the moments of knowledge. The position of the author of philosophy, the task of thinking has a greater responsibility, one comparable to the one Kant reserves for the autonomy of practical reason. The responsibility of philosophy becomes to give voice to the absolute in a way that does not succumb to the temptation to dogmatism and the epistemological assumptions that make it possible. The dialectical negation of these epistemological assumptions results in the unity of thought and being. This unity unfolds as an authorial voice or standpoint that is the principle, both constitutive and regulative, of the form and content of the *Science of Logic*.

For Hegel, the *Science of Logic* is the unfolding of the determinations of the absolute as it is for itself. The standpoint by which thought thinks itself is the highest perspective or standpoint possible in Hegel's vision of science. Even the encyclopedic progression from idea to nature and to spirit is without an outside insofar as it is the consistent explication of the same. The *Logic* itself is the 'exposition of God as he is in his eternal essence before the creation of nature and a finite mind' (SL, 34/50). The form and the content of the *Science of Logic* is the analytical exposition of the absolute from the standpoint of the absolute. It is what Hegel refers to as the speculative standpoint that grasps that any particular content and act of thought is integrally connected to every other via their mutual status as determinations of the absolute. Without an outside, there is nothing that can be known that is not always already determined by its relation to the unconditioned. This inexorable determinate relation to the unconditioned has to become explicit as the integral principle of a systematic/speculative exposition.

Hegel associates at least two different ways of providing this standpoint a content. To not fall back into precritical metaphysics, the determination of the method of the speculative standpoint must answer to the rejection of a criterion of truth as correspondence. In Hegel's early philosophical works, it is less a series of inferential steps than it is a distinctive kind of capacity that distinguishes the speculative standpoint in contrast to those of reflection, the understanding, and common sense. I will argue that intellectual intuition distinguishes the speculative standpoint in Hegel's early works. Although intellectual intuition is not dispensed with in Hegel's mature works, it ceases to have the same significance attached to it of defining precritical/post-Kantian metaphysics. In the mature works, it is the dialectical method that is able to give voice to a sovereign but not dogmatic speculative reason. Intellectual intuition and speculative dialectic both represent ways in which Hegel claims to take thought beyond the limits of Kant's critical philosophy.

They represent for Hegel transformations of what it means to think and do philosophy as paths toward the achievement of knowledge's highest end. The main difference between dialectic and intellectual intuition, between Hegel's mature and early philosophy, is the difference between mediation and immediacy.

(5) Beyond the critical philosophy: Hegel's critique of Kant

Hegel's critique of Kant's philosophy is essential to understanding the ambition of his mature philosophy and the novelty of his approach to logic. Implicit and explicit criticisms of Kant's philosophy can be found in relatively consistent form throughout all of his writings. The *Phenomenology of Spirit* at times seems to have Kant as its most frequent interlocutor, and yet Hegel seldom explicitly references Kant. Hegel's most prolonged and relatively careful appraisals of Kant's philosophy in his mature works come in the *Lectures on the History of Philosophy* and the introduction to the *Encyclopedia Logic*. Extensive insightful and critical remarks can also be found scattered throughout the *Science of Logic* – the discussion in the opening pages of the Doctrine of the Concept is perhaps the most significant for my project. But these works for the most part come after Hegel has developed what we take to be the standpoint of his 'mature' philosophy. The critique of Kant that is found therein is articulated from the standpoint of one who claims to have already gone beyond the shortcomings of Kant's system. And although the latter works also disclose how integral Hegel's critique of Kant is for the justification of his philosophical project, Hegel's earlier critiques of Kant show more precisely the way in which the young Hegel sees the limits of philosophy and conceives the path beyond them. If we are to understand the *Science of Logic's* novelty as the expression of a new standpoint and method of philosophy, and if we are to use Hegel's critique of Kant as a key to understanding the peculiar ambition that fueled Hegel in his writings in general and on traditional logic in particular, then we must turn to those readings of Kant that come before the mature works – we must turn to the works written in Jena. For it is in these early philosophical works that we see Hegel pointing out what is truly needed to overcome the Kantian philosophy, and pointing toward authentic speculative idealism.

The *Differenzschrift* (1801) and *Faith and Knowledge* (1803) were written before either of Hegel's two major original works: the *Phenomenology of Spirit* (1806) and the *Science of Logic* (1812–16). The *Differenzschrift* is a

notably difficult text written by Hegel to clarify the nature of genuine idealism and to differentiate it from the projects of Fichte and Reinhold. Both Reinhold and Fichte are shown to misinterpret the meaning of Kant's philosophy, and thus their attempt to take philosophy beyond Kant is misguided from the start. A proper understanding of Kant's philosophy is required to get beyond it. The *Differenzschrift* also shows the way in which Hegel understands his own philosophical project. Hegel at this time aligns his philosophical ambitions with those of Schelling, and we see in this early work Hegel justifying the absolute idealism he sees himself and Schelling providing and continuing to work out – it is only later that Schelling's system is interpreted by Hegel as merely 'objective idealism.'

Faith and Knowledge is invaluable because it provides us with Hegel's first extended critical reading of Kant's philosophy. Each of Kant's three critiques is included in Hegel's relatively in-depth assessment of what it is that deserves attention in Kant. Kant is shown to have outlined the possibility for a genuine speculative philosophy, but to have been too wedded to the critique of dogmatic metaphysics to see the way in which thought can nondogmatically know the absolute. Hegel remarks, by way of an allusion to a fairy tale by Johann Wolfgang von Goethe, *Das Märchen*, that the critical philosophy 'sucks the veins (of human self-consciousness) out of the king so that the upright shape collapses and becomes something between form and lump, repulsive to look at' (FK, 332/77). Kant's subjective idealism subtracts form from being and positions it strictly in thought. From Hegel's perspective, there is something lacking in Kant's account of reason that corresponds to what Hegel takes to be present in the work of himself and Schelling (SL, 37/52 & FK, 327/69). Hegel understands that by denying the unconditioned a constitutive role in theoretical cognition, Kant takes himself to be overcoming the dogmatism-skepticism impasse (CPR, A329/B386). However, Hegel's criticism is that Kant never got beyond this critical, dialectical stage or moment in the process of thinking. Hegel often says of Kant that the germ of speculative knowing was in him but that he was never able to bring it to maturity. If Kant had gone further, he would have seen not only that the constitutive power of reason is integral to the possibility of any and all knowledge but also that there is a method whereby the immanent employment of the constitutive use of reason does not end up in dogmatism. What Kant missed is the path or the means to another standpoint; he could not make the leap to the new perspective of genuine idealism that recognizes the dialectical identity of reason and world. Hegel's early works show his alignment with Schelling in the way in which Hegel characterizes this immanent nondogmatic use of reason,

associating it as he does with intellectual intuition. In Hegel's mature works, what distinguishes the standpoint of genuine idealism from all others is a methodological commitment, speculative-dialectic.

In both the *Differenzschrift* and *Faith and Knowledge*, Hegel argues that if the Kantian philosophy is to be overcome, there must be a transformation in philosophical standpoint. The two main standpoints he discusses are reflection and speculation, although he also discusses at times the standpoint of the understanding. This distinction between reflection and speculation is essential for recognizing the major aim of Hegel's mature works. Each standpoint constitutes a discourse imbued with certain epistemological and methodological assumptions. Although some scholars have accurately noted that sometimes in Hegel's later works he identifies speculative philosophy as a mode of reflection, this identification is not present in the early works.

Hegel for the most part claims that Kant's philosophy remains bound to the epistemological limits of the reflective standpoint. Hegel claims that reflection operates within the boundaries of dualism, in which the opposites cannot be synthesized into a higher unity but remain fixed in antagonism. Specifically important for the purpose of my research is the dualism of ground and grounded. Reflective philosophy is only capable of thinking the absolute as a ground for something other than itself and thus cannot conceive of the absolute as it is for itself. In other words, reflection's conception of the one will be preconditioned by its opposition to an other. Hegel will claim that the speculative standpoint constitutes a discourse that goes beyond reflection and the dualistic thinking of the absolute that is its symptom. The content of the speculative standpoint is the explication of the complex unity that in reflection remained an irresolvable antagonism. In Hegel's early and mature works, the content of nondogmatic speculative reason is the double movement of resolution (of the conflict that paralyzed reflection) and transcendence (going beyond the epistemological assumptions of reflection) to what Hegel often refers to as the idea.

The uniqueness of the early works is that the content of the speculative standpoint is provided by intellectual intuition. The ideas of reason and the concepts of the understanding can be intuited. The dualism between discursive cognition (from concepts) versus constructive cognition (from intuition) in Kant is superseded in Hegel, as is the distinction between the ideas of reason as constitutive and regulative. Arguably, the basic premise supporting both of Kant's distinctions is the denial of the capacity of intellectual intuition in human thought. In Hegel, intellectual intuition of the unity of opposites provides the content of the

speculative standpoint that Kant denied was possible. I will argue that difference between reflective philosophy and speculative philosophy is not only found in the early Jena works but is also present throughout the *Science of Logic*. Although the way beyond the critical philosophy as a philosophy of reflection is already indicated in the Jena works, it is preserved and transformed in the *Science of Logic*, in which Hegel's systematic ambition is fulfilled.

The *Science of Logic*, according to Hegel, is the all encompassing and most comprehensive of all the sciences. There is no science of which it is a part; it brings all form-content syntheses out of itself (SL, 18/40 & EL, 24/36). I argue that the best way to understand the process of the *Science of Logic* is to recognize the immanence of reason in both its regulative and constitutive function. Speculative philosophy in Hegel's sense is best understood as such. This illuminates how the immanence of the constitutive use of reason has consequences for the way in which Hegel takes up the traditional content of logic. Hegel will not ground logic in something other than itself, nor will he leave it groundless, but will explicate the moments of logic in the same discourse in which he determines the totality of all possible truth. From Hegel's perspective, adequate knowledge is intrinsically systematic, and logic as a particular domain of cognition can only be known from within this system or totality. Logic is not anterior to the system itself, but is as much an integral component in the absolute as anything else. Each distinct moment within logic has relations to other parts of the system, which help explain and extend our understanding of the particular moment, every other moment, and of the system as a whole. To overcome the Kantian philosophy, and to recognize a constitutive function of reason that is not dogmatic, Hegel develops a method, speculative dialectic, adequate to giving an account of everything. And it is this emphasis on mediation that marks the departure from his early reliance on intellectual intuition to indicate this shift of philosophical standpoint.

(6) Kant and Hegel on quantitative judgment

Logic is a complex and widely studied subject capable of both great precision and controversy. It has a long complex history that is difficult to master and, as we have already seen in Kant, is easily oversimplified. Logic as a discipline is commonly called 'abstract' since it does not concern itself with any particular material qualities. As such, it seems to be removed from our practical or everyday thinking. Students in introductory logic courses frequently ask why they are asked to endure the

labor of truth tables and proofs. ‘When am I going to use this in real life?’ Logic also seems at least one step removed from the determinate content and methods of the mathematics and sciences. In these disciplines there is a particular set of objects with determinate qualities about which we investigate and make claims that others can verify. Whether in discussions of politics, mathematics, or scientific findings, there is some object other than thought about which we are thinking/speaking/writing. But this object external to thinking is not present in the same way with logic. As a formal analytic of thought itself, logic seems to be based on the elimination of any specific content that would apply to something other than thought. For the most part, logic has been defined as an inquiry into the nature or laws of thought. It is an inquiry into rules of correct thinking. The apparent abstract nature of logic allows these rules of correct thinking to apply to or govern our cognition universally. The object of logic seems to be so abstract, since it is the mere form of what can be determined as objectively true or false. It shares with metaphysics the quality of being based on something at least once removed from the perceptual world of everyday occurrence and scientific endeavor. The objects, if there are any, of logic and metaphysics seem to resist the influence of time and space. In contrast to the results of physics and biology, the results of logic and metaphysics do not seem to follow from or take their lead from objects given in experience. Thus both logic and metaphysics seem to meet the same anecdotal fate of being too abstract, of being of questionable use. Given that my project in this work is to understand the way in which Kant’s and Hegel’s philosophical accounts of logic imply their accounts of thought’s relation to the unconditioned, it would seem to be an investigation into the relation of two abstractions. The danger for such a work seeking to establish a connection between two abstractions would be inexactitude, vagueness, or obscurity. There was a second danger involved in my research. To investigate the philosophy of logic in Kant and Hegel is already a broad task, but to situate their respective accounts in the context of their broader metaphysical ambitions compounded the problem almost exponentially. In order to solve for both dangers, I decided to focus my research on a particular topic that would serve as a linchpin of my comparisons. It would have to be a topic that both Kant and Hegel explore in some detail both in published and in unpublished texts – there must be relatively the same extent of examination in both. Initially I thought that an analysis of ‘judgment’ could serve as a concrete point of comparison. Hegel takes issue with Kant’s reduction of thought to the functions of judgment, and so the subject of judgment seemed perfect. Yet even judgment proved too broad

an issue for the scope of my project. For one, it would demand a rigorous reading of each of the four moments, with each of their submoments, of judgment. I was forced to concede the necessity of narrowing my focus further. For these reasons and those listed above (Husserl's concept of the mathematization of nature and the dominance of Analytic philosophy) I chose the function of quantity in judgment to be the entry point into exploring how metaphysical commitments have consequences for Kant's and Hegel's respective philosophical accounts of logic.

In his account of logic, Hegel follows Kant in dividing judgment up into four kinds. In Kant, the four moments and the sequence in which he usually treats them are quantity (universal, particular, singular); quality (affirmative, negative, infinite); relation (categorical, hypothetical, disjunctive); and modality (problematic, assertoric, apodictic). In Hegel, the order is the judgment of existence (positive, negative, infinite); the judgment of reflection (singular, particular, universal); the judgment of necessity (categorical, hypothetical, disjunctive); and the judgment of the notion (assertoric, problematic, apodictic). In addition to the order of exposition, we see that what is a moment in Kant is a distinct type in Hegel. In Kant, each of the four headings represents a collection of functions that contribute to every judgment. This means that every judgment has as its elements each of the four moments. In Hegel, the types are not formal functions involved collectively in every possible judgment, but are intrinsically oriented to a specific content. The specific content, as well as the formal properties of the judgment, is what gives each judgment type its singularity – its status as type as opposed to moment. For example, in Hegel the content and form of the judgment of reflection is different from the content and form of the positive judgment. The quantifiers are the specific functions of which the judgment of reflection is capable, and the specific content of the reflective judgment is adequate to exemplify these quantitative functions. A major similarity in Kant's and Hegel's treatment is that they each divide 'quantity' into singularity, particularity, and universality. Another is that subsumption is identified as the formal function characteristic of, in Kant, the function of quantity in judgment and, in Hegel, the judgment of reflection. It is not surprising that their greatest differences are best illuminated by looking at what they share in common. The most significant difference between Kant and Hegel for my project is their respective philosophical accounts of the nature of subsumption, that is, what they have in common.

The second, third, and sixth chapters of this book are dedicated to an honest reading of the logical treatment of quantity in judgment in order to provide a way to take the measure of the difference between their

respective accounts of logic. In the following, I give a brief overview of Kant's and Hegel's approach to quantitative judgment in the context of both traditional logic and their broader philosophical projects.

In the Transcendental Analytic of Kant's *Critique of Pure Reason*, we see four situations in which Kant determines the nature of quantity. First are the logical functions of judgment, second are the pure concepts of the understanding, third are the schemas, and fourth are the principles. In logic, quantity can be a determination of a concept, a judgment, or an immediate inference. Quantity in concepts concerns the extension of concepts and determines the way in which one or more concepts are contained under another concept as their ground. In immediate inferences, quantity represents a condition of logical inference from one judgment to another. Concepts and immediate inferences in their quantitative determination are not treated in the *Critique of Pure Reason*, and so in Chapter 2 my analysis will be based largely on Kant's *Jäsche Logic* and unpublished lectures. In judgment, the determination of quantity concerns the extent of a subject class that can be subsumed under a predicate. The extent of the subsumption can be determined as universal/all, particular/some, or singular/this. As a *moment* of judgment Kant suggests that each judgment involves the expression of this function. The subsumption of an extent of the subject class under or outside of the class of the predicate is the basic meaning of quantity as treated in the table of the logical functions of judgment. Kant's published and unpublished lectures on logic go into greater detail and will be reviewed in the second chapter.

The second instance in which Kant treats quantity is in the context of the deduction of the categories, most prominently in the table of categories. Here quantity is treated within the context of transcendental philosophy. Quantity as a heading of the categories is composed of unity, plurality, and totality. These represent three different ways in which an object can be thought. The categories differ from the logical functions of judgment in that they do pertain to possible objects of cognition – they are the forms of the possibility of thought's having an object, or content.

The third and fourth treatments of quantity in the *Critique* are found in the Analytic of Principles. In the Schematism chapter, quantity is treated as a transcendental time determination that conditions the possibility of objective knowledge by making possible the synthesis of concepts of the understanding and a manifold presented by intuition. Kant's account of quantity as the *schema of number* is brief and problematic. Immediately following the chapter on the schematism, is the Doctrine of Judgment, which provides a more thorough and exacting

transcendental account of quantity. There is much controversy within Kantian studies about how to interpret the Doctrine of Judgment. I argue that (1) in the Doctrine of Judgment Kant believes himself to have already in the analytic of concepts provided an account of the necessary unity of the categories of the understanding and the a priori forms of intuition (space and time), and (2) he believes himself to have shown in the schematism chapter how these two a priori forms are synthesized in a set of conditions that mark out the horizon of possible knowledge; therefore, (3) Kant proceeds in the Doctrine of Judgment to give an account of the principles to which all objects must conform if they are to count as objective knowledge. In this context Kant treats quantity as the 'Axiom of Intuition,' in which every cognitive object as appearance is necessarily an extensive magnitude. The temporal conditions for the consciousness of the unity of a homogenous object in space become the conditions without which cognition is impossible. At this point, transcendental logic and traditional logic could not be farther apart.

Kant claims that the project of the *Critique of Pure Reason* is to show how synthetic a priori judgments are possible. He demonstrates that mathematics, physics, and metaphysics are all fundamentally composed of synthetic a priori judgments. He also shows that logic is not composed of synthetic a priori judgments; rather, it is purely analytic. The transcendental project of the first *Critique* shows that physics or mathematical cognition is possible, but can it show how a discipline not composed of synthetic a priori judgments, logic, is possible? Chapter 4 argues that there is no direct way to move from the transcendental conditions of cognition to the formal analytic of logic. My reading of Hegel's treatment of quantity hinges upon the claim that this problem of a philosophical foundation for logic is not an issue for Hegel. For Hegel, this glaring gap in Kant's system, that is, the conditions of possibility for a purely analytic discipline, is the result or a symptom of a particular way of doing philosophy. Hegel avoids the perils of this problem because of the method he adopts in elucidating the content of logic. For Hegel, this difference in method is the expression of a perhaps more significant difference in standpoint.

Hegel's most direct philosophical treatment of quantity in logic is found in the second volume of the *Science of Logic*, entitled the Doctrine of the Notion. The Doctrine of the Notion is divided into three parts: subjective, objective, and absolute. The content of the first section, the subjective notion, is Hegel's presentation of the traditional content of logic: concepts, judgments, and syllogisms. Despite the apparent conventional nature of Hegel's elements (concepts, judgments, syllogisms) and

their order of treatment (concepts-judgments-syllogisms), there is a fundamental difference in the content of the elements and the process of exposition when compared to Kant's. Chapter 6 provides a full exposition of this difference, but here I will present a summary of the difference in the context of judgment. The immediately obvious major difference is the name he gives to this type of judgment that concerns the quantifiers. For the most part Hegel calls quantitative judgment a *judgment of reflection*. In certain places he also calls it a *judgment of subsumption*. These two names are indexed to whether Hegel is focusing on the content or the form of the judgment. A second difference that is important to note is that for Hegel each type of judgment has its own particular content. For Kant and the tradition, the same judgment has a quantitative, qualitative, relational, and modal character. In contrast, for Hegel the specific content of a qualitative judgment is different from a quantitative judgment. Because each has content, there are more than formal differences between them. By a 'judgment of reflection,' Hegel means to indicate that the subject term is subsumed under a predicate term because it has a relation to something outside of itself. One of Hegel's examples is 'this plant is wholesome.' This is a judgment of reflection because it is by virtue of the plant's having a relation to something other than itself, a body (for which it is wholesome), that it has the value designated by the predicate, wholesome. The predicate names the subject in its being essentially related to other things. Commentators such as Stace and McTaggart stress that it is the positing of a relation of one thing to another that is determinative about this kind of judgment. Hegel seems consistent on this point and writes in the *Encyclopedia Logic*, 'In existence the subject ceases to be immediately qualitative, it is in correlation, and interconnection with another thing – with an external world. In this way the universality of the predicate comes to signify this relativity (e.g. useful, or dangerous; weight or acidity; or again, instinct; are examples of such relative predicates)' (EL, 174/239). The predicate as 'subsuming' the subject relates the subject to something other than itself. In the example 'the window is useful,' it is through its relation to me and the temperature of my environment that the window is subsumed under the predicate. In attempting to explain this moment of Hegel's *Science of Logic*, many commentators point back to Hegel's discussion of reflection in the Doctrine of Essence. There, Hegel shows that the essence of reflection is the determination of an object within a structure of correlates: appearance/essence, grounded/ground, form/content. In this structure of correlation, one thing cannot be adequately thought without thinking it in relation to another thing. To grasp one thing

essentially is to grasp its necessary connection with something else, and this helps us understand the peculiar content proper to the quantitative judgment or, as Hegel calls it, the judgment of reflection.

Perhaps the most innovative aspect of Hegel's account of traditional logic is the standpoint and approach of the exposition. In contrast to tradition, he claims to recognize the internal and organic connection of the different terms. Following from the *Phenomenology of Spirit*, the *Science of Logic* is the fully realized speculative system of philosophy. As a speculative system, every moment in the exposition has a necessary relation to what came before it, and what comes after it. The movement of the judgment of reflection develops out of the judgment of existence and develops into the judgment of necessity. The movement within the judgment of reflection itself is from the singular to the particular and then to the universal. It is because each judgment type is not merely formal but has a content that there is not merely an external progression from one term to the other. Hegel criticizes Kant, and much of the tradition, for passing externally and even arbitrarily from one moment of judgment to the other. The systematic connection of the terms is not recognized. It is this organic unity of the terms that is the content of logic that Kant and the tradition behind him cannot see. For Hegel, there is an organic process that runs through each moment in the system: the particular judgment comes to be from the singular judgment, and in turn gives rise to the necessity of the universal judgment or in disparaging moments of the exposition: the judgment of allness. And out of the dilemmas that Hegel recognizes in the judgment of allness arises the beginning of the next judgment type – the judgment of necessity. The movement that passes through the content of logic is a moment in the movement that passes through all thought determinations contained in the *Science of Logic*. This organic and progressive exposition is the new method of philosophy that Hegel claims follows from accomplishing the philosophical standpoint of genuine idealism, and that accounts for perhaps the greatest difference between Hegel's account of logic and Kant's.

Part I

Logic and Kant's Critical Philosophy

1

Logic as Frame of the World

The leading resource in building an interpretation of the boundary between logic and first philosophy in Immanuel Kant is the *Critique of Pure Reason*. Especially in the introduction to the transcendental logic, Kant provides a clear account of the way in which logic and transcendental logic are different and the same. The purpose of this chapter, however, is to construct an understanding of Kant's view of logic itself. The most helpful passages in the first *Critique* are located in (1) the B edition preface, (2) the introduction to the transcendental logic, (3) the first chapter of the Analytic of Concepts, (4) the opening passages of the Analytic of Principles, and (5) the opening passages of the Transcendental Dialectic. We can supplement Kant's account in the *Critique* through readings of the *Jäsche logic*, the various lecture notes of his logic students, and his remarks on logic in the *Groundwork for the Metaphysics of Morals* and the *Prolegomena*, as well as Kant's own notes in his personal copy of the Meier logic textbook. All of these texts taken together provide the resources by which to construct a nuanced interpretation of Kant's view of logic for the sake of interrogating its difference to transcendental logic.

(1) A refresher course in logic: exegesis of A50/B74–A64/B88

The most extended and programmatic of Kant's discussions of the nature of logic in the *Critique* is found in the introduction to the transcendental logic entitled Idea of Transcendental Philosophy. This introduction is composed of four parts: the first and third dedicated to the nature of formal logic, and the second and fourth to transcendental logic. There is a parallelism of accounts in these passages: section 2 says of transcendental

logic what section 1 says of logic, and section 4 says of transcendental logic what section 3 said of logic. I will not be focusing on defining transcendental logic in this chapter, but a brief characterization is necessary now to (a) establish why logic plays such an important role in this introduction to transcendental logic and (b) elucidate the terms and terrain through which Kant's characterization of logic is organized.

Kant's transcendental logic is novel, and should be considered as significant for the history of logic as Gottfried Wilhelm Leibniz's *mathesis universalis*. The transcendental logic as represented in the first *Critique* is composed of two parts: analytic and dialectic. The analytic concerns the cognitions of the understanding, and the dialectic the cognitions of reason. Kant calls the analytic part of the transcendental logic an analytic of truth, because only the cognition of the understanding can be said to be objectively true or false. The ideas of reason, because they pass beyond the bounds of experience, are undecidable and thus do not directly add anything to our picture of the world. Thought at the level of the understanding does have a decidable, objectively true or false content, since in all of its functions it is intrinsically oriented to the givenness of an object of pure or empirical intuition. It is thus through the understanding that human thought can claim to know the world it experiences and perceives.

Kant's purpose in the introduction to the transcendental logic is not to introduce us to logic. He takes it to be something with which he can presume his reading public to be acquainted. Kant's presentation of logic in this context is very concise, even compared to his published *Jäsche logic*. It is strategic – it leaves out what elsewhere he goes into in great detail. Kant tells us as much as we need to know about logic in order for him to introduce us to the possibility and nature of an 'other' logic. This other logic concerns the form of thought in relation to any possible experience. After showing in the transcendental aesthetic that the a priori forms of intuition, our capacity for receptivity, are time and space, Kant in the transcendental logic begins to lay out the a priori forms of thought, or spontaneity. He 'uses' the tradition of logic to introduce us to something, he claims, we have never thought of before.

The introduction is titled 'Introduction to the Idea of a Transcendental Logic.' Ostensibly this introduction is to introduce us to the idea of a transcendental logic and to prepare us for both of its specific divisions. As such, it is an introduction to the analytic as much as it is of the dialectic. This new logic to which Kant is introducing us catalogues the conditions that make cognition and experience possible (analytic of the concepts of understanding), as well as points out the limits beyond which human knowing cannot go (dialectic of the ideas of reason). This

obvious interpretation of the introduction is reasonable and questionable. It can be challenged by considering what immediately follows the introduction – the first book of the *Analytic of Concepts*, and specifically the metaphysical deduction. The importance of the introduction is not just structural or general in laying out the disciplinary difference between the two logics, but chronological – it has a specific import for what follows linearly immediately after it. His introduction not only uses logic to introduce us to transcendental logic but more importantly to set the stage for the use of logic as a clue for the contents of the transcendental logic. Thus not only the possibility but also the actual content of transcendental logic takes its cue from logic.

The first chapter of the transcendental analytic's first book contains what in the B edition Kant calls the *metaphysical deduction of the categories*. The metaphysical deduction is one that moves from the traditional doctrines of logic to the necessary and universal structures of the mind. Kant titles the section in which the metaphysical deduction is found 'The Clue to the Discovery of all Pure Concepts of the Understanding.' Scholars place different emphasis on the connotation of the word 'clue,' and a good number question Kant's assessment of these passages as in any way containing a deduction. As a *clue*, logic provides a guidepost for discerning the more basic principles involved in experience and cognition; it *suggests* something to us about the nature of the mind. While the knowledge of the world is always growing and expanding, the framework or structure of the one who does the knowing is constant and unchanging.

From the section on the clue, Kant moves into the more complex and difficult arguments of the transcendental deduction, with its historically significant reference to the transcendental unity of apperception. What tends to be interpreted as the decisive moment of Kant's critical philosophy is structurally dependent upon a view of logic that is disclosed in the introduction, and made use of in the 'clue' section. Because of the leverage that logic provides for the real work of the *Analytic of Concepts* (and its first section particularly), we would be wise, perhaps, not to interpret the purpose of the introduction in accordance with what its title suggests. It is as if for the sake of its function as clue the introduction provides us a reminder, a quick refresher course on the idea of logic.

(A) Analysis of section 1: general and pure logic

Section 1 introduces us to the logic that will be used for the metaphysical deduction and whose divisions are paradigmatic for the transcendental logic as a whole. This section presents us with two major distinctions and then reiterates them as rules that guide the work of the logician.

In a sequence of steps Kant delimits what the subject matter of logic is and he does this primarily by exclusion or negation. We will trace Kant's course through this section in the name of building an interpretation of the idea of logic that the *Critique* will use in the rest of its work.

(i) *General and particular logic: the form of thought apart from all objects*

The first part of the introduction is entitled 'Logic in General.' Yet it begins with two paragraphs that argue for the necessity of an inquiry into the a priori forms of knowledge, just as the transcendental aesthetic had been an inquiry into the a priori forms of intuition.

Kant's first step in characterizing the nature of 'logic in general' does not happen until the end of the second paragraph. This characterization serves largely a context-dependent function. Logic is introduced into the discussion to make the distinction between an analysis of the understanding and an analysis of sensibility. The distinction between logic and the aesthetic is presented consistently throughout Kant's lectures on logic primarily in the context of the 'perfections of cognition,' and is also found in G. F. Meier's *Vernunftlehre*. I take Kant's point in this context to be that logic and the aesthetic are both general – they pertain to a whole set of objects without exception. The aesthetic as 'the science of the rules of sensibility in general,' and logic as 'the science of the rules of understanding in general' (CPR, A52/B76) explicate norms or functions that make any of the particular sciences possible, and whose consistency is guaranteed, as we will see, by the same source of the consistency of experience.

Thus, Kant starts talking about logic at the brink of an analogy: just as a transcendental aesthetic deduces the conditions of possibility for the objects of sensibility/receptivity, a transcendental logic deduces the conditions of possibility for the objects of thought/spontaneity. This distinction between aesthetic and logic is not found in comparable discussions of logic elsewhere in the *Critique*, neither in the *Analytic of Principles* nor in the *Transcendental Dialectic*. This serves to emphasize the singular importance of logic at this particular juncture in Kant's overall argument. On the one hand it is introduced immediately after the conclusion of the transcendental aesthetic, that is, analysis of the a priori forms of intuition, and on the other it serves to introduce the necessity and nature of a transcendental logic, that is, analysis of the a priori forms of thought. In other words it is doubly a function of transition – it transitions us from the transcendental aesthetic to the transcendental logic as a whole, and it provides us a clue into the most primordial structures of mind.

The second definitive step Kant takes is to divide logic into general (*allgemeinen*) and particular (*Verstandesgebrauchs*). This division of logic is first in the order of exposition in the *Jäsche logic* as well as in Meier's *Vernunftlehre*. It serves to restrict the nature of logic by distinguishing it from the logics of particular disciplines. It is thus a formal canon of thought as such and not an organon of a particular science:

Now logic can be undertaken with two different aims, either as the logic of the general or of the particular use of the understanding. The former contains the absolutely necessary rules of thinking, without which no use of the understanding takes place, and it therefore concerns these rules without regard to the difference of the objects to which it may be directed. The logic of the particular use of the understanding contains the rules for correctly thinking about a certain kind of object. The former can be called elementary logic, the later however, the organon of this or that science. (CPR, A52/B76)

The path that Kant is taking, the order of his exposition, is primarily concerned with the elementary logic of the understanding in general. This path 'contains the absolutely necessary rules of thinking, without which no use of the understanding takes place.' This elementary logic deals with rules for the operation of the understanding itself regardless of what the understanding happens to think about. It is thus the form of thought undifferentiated by one set of objects over and against others. The source of the generality of the rules is the understanding itself, taken in abstraction from or prior to any determinate thought that no valid cognition of an object is possible without in some sense already adhering to them. This elementary logic contains the rules of thought unconditioned by the givenness of sensibility or the horizon of any one particular kind of inquiry – it is the 'absolutely necessary rules of thinking.'

In contrast to general logic is a logic conditioned by a particular kind of object or domain of inquiry a logic that has 'regard to the difference of the objects to which it may be directed.' 'The logic of the particular use of the understanding contains the rules for correctly thinking about a certain kinds of object.' Such a logic would function as the organon for a particular science. Still formal in the sense of not having a material content of its own, a particular logic is differentiated from others by the set of objects investigated by the particular science of which it is the organon. It provides the parameters within which a determinate set of objects external to thought can be cognized. The organon of biology

would be distinct from the organon of architecture, while the canon of thought, general logic, would apply to them both and function as a common assumption. An organon and the science it frames would both necessarily agree with the rules set out by general logic, but would also involve a determination that goes beyond the operations of the understanding in abstraction from sensibility, or perhaps more saliently, objects in general. Particular logic, as 'the rules for correctly thinking about a certain kind of object,' is one step removed from the universality characteristic of elementary logic. Particular logic has a conditioned generality, one that is circumscribed by the limits of its discipline. 'In the schools the latter (the organon) is often stuck before the sciences as their propaedeutic, though in the course of human reason they are the latest to be reached, once the science is long complete.... For one must already know the objects rather well if one will offer the rules for how a science of them is to be brought about.' The parameters formulated by a particular logic are at once the basic operating principles of a particular science and the 'latest to be reached.' An organon presumes an entire field of investigation that it then formalizes.

This division between general and particular logic is also found in the *Jäsche logic*, although the terminology is slightly altered. However, Kant is consistent in the characteristics or marks by which he defines and differentiates general logic. He characterizes the rules of logic as necessary, while those of determinate sciences or mathematics are contingent (JL, 13/528). This division rests on the fact that in general logic the rules are grounded in the operations of the understanding taken by itself and thus are necessary for all thought, while in the contingent logic the rules are determined in accordance with the presence of an object to the understanding. The rules for the very operation or activity of thought taken independently of an object are necessary and the specific subject matter of general logic. 'We cannot think, we cannot use our understanding, except in according to certain rules.' The organon of a branch of math or physics is contingent because it concerns the relation of the understanding to the type of object given to thought by an empirical or pure intuition. This determinate relation of thought to a particular kind of intuitive object/appearance implies the contingency of the logic of that science, and is why these sciences involve synthetic cognition and are not merely analytic.

If now we put aside all cognition that we have to borrow from objects and merely reflect on the use just of the understanding, we discover those of its rules which are necessary without qualification, for every

purpose and without regard to any particular objects of thought, because without them we would not think at all. (JL, 12/528)

The generality characteristic of the logic in which Kant is interested concerns rules 'without which we would not think at all,' which are thus 'necessary without qualification.' It is thus a canon because it pertains to all thought universally (JL, 13/529), and not an organon since it is not contingent upon any object whatsoever. 'General logic abstracts from all objects...a particular logic presupposes acquaintance with a certain kind of object, to which it is applied' (JL, 17/532). This is not to say that particular logic is the determinate cognition of particular objects, but it 'presupposes exact acquaintance with the sciences, their objects and sources' (JL, 13/528–9). General logic is cut off from any access to objects. The contingencies of objects given in space and time are other than the sphere general logic circumscribes. It does not presuppose a set of objects in particular, but rather is constituted by the analytic of thought independent of any kind of givenness. 'Logic is to teach us the correct use of the understanding, i.e., that in which it agrees with itself' (JL, 14/529). General logic concerns then the form of thought's agreement with itself. Particular logic, an organon of this or that science, is a framework that makes a certain horizon of determinate cognition possible; it allows a picture of the world to materialize. General logic is, as it were, a framework of frameworks, the condition sine qua non of truth, while an organon contains the limit conditions for an inquiry to agree with its own object/determinate field of inquiry.

In the *Dohna-Wundlacken* logic we read the following: 'Logic abstracts from all content, hence also from all cognition and it is not an organon. But mathematics is not only a canon but also an excellent organon...' (DW, 696/434). Mathematics, in contrast to general logic, has a relation to the possibility of objects of experience – it has a particular relation to intuition which differentiates it from other forms of cognition. Mathematics based on pure intuition has the universality requisite for being an organon for any science of objects in space and time, but not the universality requisite for being the form of thought itself. The presence of the element of particularity, exteriority, or contingency in thought explains why these sciences involve synthetic cognition and are not merely analytic. The specificity of the logic Kant is laying out involves a necessity that applies to all acts of thought:

If now we put aside all cognition that we have to borrow from objects and merely reflect on the use just of the understanding, we discover

those of its rules which are necessary without qualification, for every purpose and without regard to any particular objects of thought, because without them we would not think at all. (JL, 12/528)

It is interested in rules 'without which we would not think at all,' which are thus 'necessary without qualification.' It is thus a canon because it pertains to all thought universally (JL, 13/529) and not an organon, since it is not contingent upon any object whatsoever. The idea of contingency here represents an element exterior to thought itself that implies certain limits in circumspection. 'General logic abstracts from all objects...a particular logic presupposes acquaintance with a certain kind of object, to which it is applied' (JL, 13/529). This is not to say that particular logic is the determinate cognition of particular objects, but it does 'presuppose exact acquaintance with the sciences, their objects and sources' (JL, 17–18/532). General logic is cut off from any access to objects. It does not presuppose a set of objects in particular; rather, its field is thought taken by itself. 'Logic is to teach us the correct use of the understanding, that is, that in which it agrees with itself.' (JL, 14/529) Particular logic is a framework that makes a certain horizon of determinate cognition possible, while general logic is, as it were, the framework of frameworks. The agreement of thought with its own rules is the condition sine qua non of truth, while an organon contains the limit conditions for an inquiry to agree with its field.

The logic Kant delimits through this distinction concerns the form of thought itself prior to the givenness of any particular object, or even an object in general. Although some controversially suggest that Kant's logic is intuitionistic, it is undeniable that Kant denies to the human standpoint an intuition of the form of thinking itself. This same point in part leads Béatrice Longuenesse in her book *Kant and the Capacity to Judge* to argue that general logic is a practice of discursive reflection rather than a construction of concepts through intuition. General logic must be distinguished however from all forms of thought about an object, and thus we cannot imagine that the agreement of thought with its own rules is an intuition. Kant is clear that the categories involved in discursive cognition, relation, and mode, are cognition from concepts, and are oriented indirectly to intuition. General logic is not a science in the sense of consisting of synthetic and a priori judgments. As such, it does not extend our knowledge of the world in the way in which discursive cognition does. Longuenesse's defense of Kant rests on

using 'reflection', as distinguished from either discursive or constructive cognition, to show the kind of thought involved in general logic. Because we cannot intuit the form of thinking in general, we cannot hold the contents of a general logic to be true in the same way that we can hold the findings of physics to be true. The absence of intuition in the discipline of general logic is an essential factor in its being distinguished from not only the rest of the sciences but also from particular logic. But the absence of an 'object' radicalizes Kant's claim about the nature of general logic, and following Longuenesse calls us to question how it is general logic is possible. If we are to claim that 'reflection' makes logic possible, we would then have to turn to the question of how reflection is possible, as well as to make clear how this claim relates to Kant's *Amphiboly of the Concepts of Reflection*, in which Kant is speaking primarily about objects existing within the sphere of determinate maths and sciences.

The logic that Kant deploys for his metaphysical deduction is general; it is universal and necessary because it concerns the rules that structure the operation of thought itself. Every determinate cognition of an object, such as those that make up mathematics and natural science, not only must correspond to the object to be true but must already conform to rules that condition the operation of the understanding itself. What Kant means by a general logic is a treatment of cognition antecedent to its being the cognition of any determinate object – the analysis of thinking prior to its involvement with any object or content. Particular logic as a logic is formal, but consists in the formal rules for the thinking of a determinate set of objects. Through separating or distinguishing general logic from particular logic, Kant situates general logic as a universal framework in which all inquiry must take place.

(ii) *Pure and applied logic: the form of thought apart from all psychology*

The third paragraph of the 'On Logic in General' section subdivides general logic into pure (*reine*) logic and applied (*angewandte*) logic. This division serves further to explicate the nature of the logic that will introduce us to the nature of transcendental logic and function as the clue to the categories. This division involves the complex relation between logic and psychology. A pure logic is one that is not influenced by the actual existence of the inner state of a psychological subject, and is based on how we ought to think rather than on how we actually do think. It is

pure because, as we will see, it looks at the form of thought 'apart from all psychology' (JL 14/529).

As in the preceding division between general and practical logic, there is only one paragraph devoted to this distinction, and so reference to Kant's *Jäsche logic* and the various extant transcripts of his lectures in logic will be necessary. Also as in the preceding division, we will see that Kant makes progress in delimiting the nature of logic by purging from it anything contingent. Having just separated general logic from any relation to an object, now Kant separates general logic from the psychological states of self-consciousness. These states function as marked by contingency. Thus the logic Kant takes as its clue is not determined by the conditions of an object being given nor by the empirical conditions of a psychological subject.

Now general logic is either pure or applied logic. In the former we abstract from all empirical conditions under which our understanding is exercised, e.g., from the influence of the senses, from the play of imagination, the laws of memory, the power of habit, inclinations, etc., hence also from the sources of prejudice, indeed in general from all causes from which certain cognitions arise or may be supposed to arise, because these merely concern the understanding under certain circumstances of its application, and experience is required in order to know these.

The characterization of logic as pure subtracts logic from the realm of prejudice, from the empirical conditions of the understanding studied by psychology – the empirical conditions. It is a treatment of the operations of the understanding prior to its connection with the material conditions of inclination, memory, habit, and so forth. This list of conditions is augmented at A54/B79 in two contexts. First, in the context of knowledge, applied general logic 'deals with attention, its hindrance and consequences, the cause of error, the condition of doubt, reservation, or conviction, etc.' Second, in the context of morality, applied logic attends to the 'hindrances of the feelings, inclinations, and passions to which human beings are more or less subject...' In both contexts what Kant is separating from general and pure logic is any admixture of thought with the empirical conditions considered by psychology. 'What I call applied logic is thus a representation of the understanding and the rules of its necessary use in *concreto*, namely under the contingent conditions of the subject...' Thought in abstraction from the contingent conditions

of an empirical subject is the ground for the construction of the purely necessary rules of intelligibility. Kant seems to suggest that as an a posteriori discipline, applied logic applies the formal rules of general logic to an empirical ego. 'A general logic, however, is then called applied if it is directed to the rules of the use of the understanding under the subjective empirical conditions that psychology teaches us' (CPR, A52/B77). From this passage applied logic is the general rules of the understanding under the empirical-psychological limit conditions. Is this the logic of the empirical ego? I think this idea of thought 'being under the subjective empirical conditions' should be interpreted in light of the last clause of the paragraph as a superimposition of the 'ought' (the form of thought itself) upon the 'actual' (the thinker under the conditions of an empirical ego). This superimposition takes the form of a reactionary corrective or cathartic: 'On this account it is also neither a canon of the understanding in general nor an organon of particular sciences, but merely a cathartic of the common understanding' (CPR, A52/B77). What does he mean by the 'common understanding'? Kant claims that applied general logic cannot function as the canon for cognition in its general use since the element of 'application' indicates that it has its ground in experience. It takes subjective-empirical conditions as that for which it gives the rules. It is different from a particular logic, or an organon, insofar as it contains 'the subjective empirical conditions that psychology teaches us.' The subjective empirical conditions of thought, the actual psychological conditions of the common understanding, limit the scope of the formal operations involved, making it unsuitable for a propaedeutic to all inquiry and for a formal canon of all thought 'without qualification.'

Kant's reason for distinguishing the logic in which he is interested from particular logic and applied logic is different. In his discussion of particular logic his point is to show that the inquiry of general logic is focused on the a priori form of thought independent of any differentiation by an object. For applied logic, his point is to show that a logic that is general and pure is beyond any traces of psychology. That logic he will use in his metaphysical deduction does not presuppose an actually existing psychological subject. It does not take an empirical ego or 'how we actually do think' as an assumption for its inquiry. Applied logic as a cathartic aims to direct our customary ways of thinking toward how we ought to think, that is, to that form that is the content of general and pure logic. It is a posteriori because it assumes the disagreement between how we actually think and how we ought to think. As a subset of general

logic, applied logic is not determined by any object and so can provide no rules for the cognition of determinate objects – it is not an organon. Yet, unlike general and pure logic, it is not a canon since it takes the empirical conditions of an actual self-consciousness as its condition. Its corrective function assumes the understanding mixed with other faculties, psychological states, and thus is a step removed from the universality characteristic of an a priori treatment of thought. The same point is stressed in the *Jäsche logic*:

In pure logic we separate the understanding from the other powers of the mind and consider what it does by itself alone. Applied logic considers the understanding insofar as it is mixed with the other powers of the mind... [It] really ought not to be called logic. It is a psychology...but a propaedeutic it simply is not. For psychology is a part of the philosophical sciences, to which logic ought to be the propaedeutic. (JL, 18/532)

Applied general logic 'is psychology in which we consider how things customarily go on in our thought, not how they ought to go on' (JL, 18/532). In the *Vienna logic* (791/252), Kant claims this applied logic *presupposes* psychology and its object. By limiting itself to contingent or empirical principles it is 'a science of how we think under various hindrances, not of how we ought to think.' We deviate from how we ought to think through the influence of the hindrances of inclination, habits, memories, and so on. Swayed by the moving pictures of actual life, our thought is influenced by contingency and thus presupposes thought's alienation from its own self-agreement. 'In logic, however, the question is not about contingent but about necessary rules; not how we do think, but how we ought to think' (JL, 18/532). From the Dohna-Wundlacken lectures we find the same refrain: 'Logical rules are not ones according to which we think, but according to which we ought to think... All psychological observations must be excluded from pure logic' (DW, 694/432). Again, the content of applied logic would consist of rules that governed the tendency for thought to be moved by those faculties and motives studied by psychology. A human being in its actual psychological existence cannot serve as a ground for the rules necessary for all knowledge, since it is conditioned by the prejudices of the moment.

If we were to take principles from psychology, i.e., from observations concerning our understanding, we would merely see how thinking

does take place and how it is under various subjective obstacles and conditions; this would lead then to the cognition of merely contingent laws. (JL, 14/529)

As the contingency of objects distinguished general from particular logic, here the contingency of the psychological subject distinguishes pure from applied general logic. The absolute necessity and unqualified universality of the rules of thought are not conditioned by any determinate content or form, any subjective motivation or prejudice. Absolute independence from admixture with anything external to itself, logic is an analysis of 'the necessary use of the understanding, which one finds in oneself apart from all psychology' (JL 14/529). What one finds in oneself apart from all psychology is a necessary and universal logic of thought itself, one abstracted or removed from the contingencies of external objects (general) and psychological states (pure).

(iii) Two rules for the logician

The first two paragraphs of the introduction presented us with the idea that there is a transcendental exposition of the a priori contribution to experience and knowledge made by the mind. The third and fourth paragraphs presented us with the idea of a logic that is general and pure. The fifth paragraph begins by reiterating the difference between pure general logic and applied general logic, and as we have seen the sixth paragraph further extends his analysis of applied logic. But the full import of the fifth paragraph should not be passed over, significant as it is for illuminating the particularities of the discipline of logic.

After reiterating the difference between pure and applied logic, Kant claims that, although 'brief and dry,' pure general logic provides the 'scholastically correct presentation of a doctrine of the elements of the understanding...' (CPR, A54/B78). The correct presentation of general and pure logic follows from two rules 'that the logician must always have in view.' It is the domain and content of the work circumscribed by these rules that represents the canon of the logical use of the understanding and reason. A brief analysis of them will provide us the opportunity to distinguish the work of the logician from those of other disciplines.

1. As general logic it abstracts from all contents of the cognition of the understanding and of the difference of its objects, and has to do with nothing but the mere form of thinking.
2. As pure logic it has no empirical principles, thus it draws nothing from psychology (as one has occasionally been persuaded), which

therefore has no influence at all on the canon of the understanding. It is proven doctrine, and everything in it must be completely a priori. (CPR, A54/B78)

These two rules recapitulate the steps Kant has taken in giving an account of the nature of logic. We see the double negation that clarifies the logic that will serve as the clue: it is determined neither by objects or psychology. It is a treatment of cognition independent of a relation to an object: 'it abstracts from all contents of cognition of the understanding and of the difference of its objects...' It is a treatment of thought independent of an empirical psychological subject: 'it has no empirical principles, thus it draws nothing from psychology.' These two rules correspond to two abstractions, negations, or subtractions that establish the conditions for the logic Kant takes as his 'clue.' They are the limit conditions for logic, since without adhering to these rules the logician's attempt to provide a canon of thought is errant from the beginning. They also distinguish the work of the logician from that of other forms of learnedness (mathematics, metaphysics, natural science), and even from the unlearned (common sense), since the work of the logician must borrow nothing from experience.

Kant's view is that for the most part metaphysics, mathematics, the natural sciences, and even common sense unproblematically assume not only the existence of concepts but also the existence of objects of intuition. These two assumptions mark out the terrain of the correspondence theory of truth. It is the task of the scientist and mathematician to make the decision concerning what does or does not belong under each concept or rule according to pure or empirical intuition. Natural science and mathematics are synthetic cognitions because they bring together concepts with intuition – the concept of the understanding has a determinate content supplied through the contribution of intuition. Metaphysics does not bring together in judgment a concept and a manifold presented by intuition – its object is beyond the possibility of experience and thus is discursive cognition, cognition from concepts. But it is still cognition with a content. It is synthetic because it goes beyond the meaning of a concept to bring it together with another concept, and it is this relation that is its content. General and pure logic does not have this power of amplification. This is in large part due to its subtraction from the sphere of the contingent. One of Kant's notes in his copy of Meier's logic text says this as well: 'Logic can indeed provide us with general criteria for the correct use of the understanding; not, however, for the power of judgment, because it only provides rules, yet not simultaneously how one is

to decide what belongs under them' (NF 16/258). Logic is not involved in the decision as to what does or does not belong under concepts – it is as if were blind to this distinction. Being without objects, logic has no power to add to our objective picture of the world. The indispensable value of logic is its ability to direct the cognition of the sciences, metaphysics, and common sense toward formal correctness. It presents the formal conditions under which we can increase, extend, or augment our knowledge by applying concepts to pure or empirical intuition. These formal conditions are outlined through two steps. In the following analysis of the third section of the introduction we will see the way in which general and pure logic provides the negative, necessary, and purely formal conditions of truth, but that the positive and sufficient condition of truth requires a relation of thought to an object.

(B) Exegesis of section 3: analytic and dialectic

The first section of the introduction to the transcendental logic as a whole elucidated the nature of general and pure logic. The second section provides a definition of the nature of a transcendental logic and is taken up in the third chapter of this text. To further the current project of developing an understanding of Kant's conception of logic, we now take up the third section. Here Kant divides general and pure logic into two parts: analytic and dialectic. The analytic part will consist in explicating the rules for the operation of the understanding, the form of its self-agreement. The dialectic of general and pure logic will consist in a corrective of errant reasoning, that is, a critique of deviations from how we ought to think. It is distinguished from general and applied logic by the nature of the error of which it is the corrective.

The importance of this third section of the introduction for subsequent moments in my argument is hardly negligible. The division of logic into analytic and dialectic anticipates the division found in Kant's transcendental logic, and also highlights the importance of the nature of truth for differentiating a transcendental logic from a general and pure logic. General and pure logic provides the necessary conditions for truth, while transcendental logic provides the sufficient conditions. In the division of general and pure logic into analytic and dialectic Kant articulates a conception of truth that will be necessary for his latter justifications for the nature of transcendental logic.

(i) Analytic – truth and intelligibility

In giving an account of the division between analytic and dialectic Kant begins with what might seem like a detour. He begins by citing 'The old

and famous question with which the logicians were driven into a corner and brought to such a pass that they must either fall into a miserable circle or else confess their ignorance, hence the vanity of their entire art, is this: What is truth?' (CPR, A57/B82). Why does Kant begin his elucidation of the two main parts of logic with this comment on truth? Why is the problem of truth for the logician so pivotal at this moment? Partly it is to show the nature of the universal criterion of truth supplied by the analytic part of general and pure logic. The misery into which the problem of truth drives the logician is based on a faulty conception of the nature of truth. As we will show, the question of truth provides Kant adequate subject matter with which to establish the boundary between general and pure logic and transcendental logic.

Kant calls 'nominal' the definition of truth as the 'agreement of cognition with its object.' Kant suggests that this nominal definition has been assumed within the tradition of logic. It is this nominal assumption that entails such miserable difficulties for the logician in responding to the question regarding the nature of truth. The problem with this definition is that it begs the question: it claims that truth is the correspondence of cognition with its object, yet it remains unclear how one is to know that one's cognition corresponds to the object. For one would have to know the object before one could tell whether one's cognition corresponded to it or not. This problematizes the correspondence theory of truth. Kant asks, 'What is the general and certain criterion of the truth of any cognition?'

In the second paragraph of this section, Kant allows himself a sarcastic gloss on the impossibility of answering this question sufficiently. How is it that we can know about the world, and affirm truths about geometrical demonstrations, yet we cannot know what it is that makes a judgment or inference true or false? The impossibility of answering this question has disadvantageous consequences that ought to be cleared up if possible. The criterion about which Kant is asking is general, that is, 'valid of all cognitions without distinction among their objects.' If such a criterion of truth is sought, then it cannot be found in the relation of correspondence between cognition and a particular given object. The given object would be the matter or the content of thought, and the logician would endeavor to discern whether they are in agreement. But, as mentioned earlier, if we are to detect that there is agreement between cognition and its object, then we must already know the object in order to be able to recognize the agreement. Additionally, such a procedure would determine the universal criterion of truth on the basis of a particular instance

of cognition. Such a procedure would be a posteriori, and thus would invite the skepticism of David Hume.

If I tell my wife, 'The dog is watching chipmunks scurry across the deck,' she could investigate the line of my dog's vision. She could check to see whether my a posteriori judgment is an accurate reflection of the external reality. She could confirm the judgment by reference to an experience. Now, if through the confirming investigation, she and I agree that the dog is indeed watching chipmunks, what would be the criterion of truth? It would be easy to say 'correspondence' – what is in thought is also in being. But Kant's question, the question that terrorizes the logician, is, is there a mark of this correspondence that is common to all occasions of truth? What is the general criterion of truth? It is in relation to this question that Kant's sarcasm or pessimism is leveled: 'it would be completely impossible and absurd to ask for a mark of the truth of the content of cognition...' (CPR, A59/B83). The whole enterprise of answering this question is misguided, unreasonable: 'It is already a great and necessary proof of cleverness or insight to know what one should reasonably ask.' The question that backs logicians into a corner, that forces them to consider the vanity of their art, is ill-founded. 'It is clear that a sufficient and yet at the same time general sign of truth cannot possibly be provided' (CPR, A58/B83).

In the face of the impossibility of a universal and material criterion of truth, Kant argues that a purely formal universal criterion of truth can be found in logic:

logic, so far as it expounds the general and necessary rules of understanding, must present criteria of truth in these very rules. For that which contradicts these is false, since the understanding thereby contradicts its general rules of thinking and thus contradicts itself. (CPR, A59/B84)

The purely formal criterion of truth provided by general and pure logic is a necessary condition for truth. This criterion is necessary, for the agreement of thought with its own rules must be achieved if truth is to be. But, although necessary, this criterion is not sufficient by itself. In order for there to be truth, not only must cognition agree with the formal rules of logic but it also must actually correspond to the particular material object of thought. The generality can only be found in the formal rules of thought, not in the material correspondence of thought and being.

The following passage is the entirety of the fifth paragraph of this section, and I quote it in its entirety because it is the textual passage in which Kant divides general and pure logic into analytic and dialectic, and because it makes clear the way in which the question of truth is pivotal for this division:

General logic analyzes the entire formal business of the understanding and reason into its elements, and presents these as principles of all logical assessment of our cognition. This part of logic can therefore be called an analytic, and is on that very account at the least the negative touchstone of truth, since one must before all else examine and evaluate by means of these rules the form of all cognition before investigating its content in order to find out whether with regard to the object it contains positive truth. But since the mere form of cognition, however well it may agree with logical laws, is far from sufficing to constitute the material (objective) truth of the cognition, nobody can dare to judge of objects and to assert anything about them merely with logic without having drawn on antecedently well-founded information about them from outside of logic, and in order subsequently merely to investigate its use and connection in a coherent whole according to logical laws, or, better, solely to examine them according to such laws. Nevertheless there is something so seductive in the possession of an apparent art for giving all of our cognitions the form of understanding, even though with regard to their content one may yet be very empty and poor, that this general logic, which is merely a canon for judging, has been used as if it were an organon for the actual production of at least the semblance of objective assertions, and thus in fact it has thereby been misused. Now general logic as a putative organon, is called dialectic. (CPR, A60–1/B84–5)

Logic is called analytic when it evaluates ‘the entire formal business of the understanding and reason into its elements.’ This *formal business* is the ‘negative touchstone of truth.’ Without being in agreement with the rules for its own operation, thought cannot say something true about the world. I interpret this to mean that it is by violating the rules of logic that a statement excludes itself from the realm of intelligibility, in which intelligibility qualifies a thought assessable in terms of material correspondence.

Kant suggests that all cognition must be *first* subjected to a logical analysis before an evaluation at the level of content can take place. In

other words, a thought must first conform to the rules of validity prior to being evaluated in terms of correspondence. Logic is a formal business because it does not try to tell us anything about the world. It is blind, unable to judge whether the content of our cognition agrees or not with objects. As a negative touchstone of truth, it cannot assess the objective truth or falsity of the content of an argument, but merely its formal validity. The objective agreement of thought and being, of correspondence, is the province of science proper, that is, any inquiry based on the cognition of objects presented in either pure or empirical intuition. The business of logic is to explicate the formal rules that frame intelligibility, not to augment our understanding, our picture of the world (see also: VL, 793/254).

From Kant's perspective, the fact that the subject matter of logic is not anything in the world, is not any determinate object of intuition, is harmonious with the fact that logic as a discipline has not changed significantly since its inception. It is not in the nature of logic to change because there could never be new information that could add to or shed new light on the terrain of formal logic. Although comparable to Euclid's mathematical demonstrations, Aristotle's organon circumscribed and exhausted a domain in a way that a mathematical text never could. There will always be new discoveries in mathematics and in the sciences because our understanding of the material world is always open to the possibility of novelty. But for Kant logic is a fixed/finite analysis, so that we can say that the negative, formal conditions for the possibility of truth do not change. This is one of the fundamental assumptions necessary for Kant's metaphysical deduction to work and for his history of logic to work. It is almost as if Kant sees the mind, the rules governing cognition taken by itself, as a fundamentally unchanging framework that makes our always-in-process knowledge of the objective world possible.

The analytic part of general and pure logic is a negative touchstone of truth containing the rules of thought concerning concepts, judgments, and inferences. The discussion of concepts is composed as the distinctions pure/empirical, a priori/a posteriori, higher/lower, broader/narrower, and genus/species, as well as the extension and rules of subsumption (JL, 91–100/589–97). The discussion of judgment would involve the different moments of the four headings quantity, quality, relation, and modality, as well as discussions of propositions, theorems, and so forth. The discussion of inferences would involve both immediate (subalternation, contrary, subcontrary, conversion, etc.) and mediate inferences (categorical, hypothetical, disjunctive, the four figures, etc.), which Kant

would link to the understanding and reason respectively. All of these together make up the content of the analytic part of logic and represent what Kant claims is a negative touchstone of truth. If cognition does not already adhere to the rules laid out in the analytic part of general and pure logic, then it is not coherent with the possibility of objective evaluation and thus does not stand within the horizon of what can be demonstrated to be true or false – nothing intelligible can thus be said.

The merely logical criteria of truth, namely the agreement of a cognition with the general and formal laws of understanding and reason, is therefore certainly the condition *sine qua non* and thus the negative condition of all truth; further, however, logic cannot go, and the error that concerns not form but content cannot be discovered by any touchstone of logic. (CPR, A59/B84)

The logician will never enter into dispute about the content of the sciences, but will only note those claims that are *unintelligible* because they are formally invalid. As soon as general logic tries to make positive assertions, as soon as it tries to become a positive doctrine and thus to augment our picture of the world, then the necessity of the dialectical part of pure and general logic arises. For it is a fidelity to the limit marked out by the analytic of pure and general logic that guides the dialectical part of logic in its cathartic efforts.

(ii) *Dialectic: purgative and putative functions*

Kant presents two senses of the word dialectic in this section – one is the sense of dialectic he includes in his general and pure logic, and the other is the one he excludes. The fifth paragraph ends with the idea of dialectic as either a ‘logic of illusion’ or a critical corrective. Both senses are further explained in the sixth and seventh paragraphs. Here is the passage from the fifth paragraph, already quoted above:

there is something so seductive in the possession of an apparent art for giving all of our cognitions the form of understanding, even though with regard to their content one may yet be very empty and poor, that this general logic, which is merely a canon for judging, has been used as if it were an organon for the actual production of at least the semblance of objective assertions, and thus in fact it has thereby been misused. Now general logic as a putative organon, is called dialectic.

Kant further explains the use of general logic as an organon in the next paragraph: 'general logic, considered as an organon, is always a logic of illusion, i.e., is dialectical...idle chatter, asserting or impeaching whatever one wants with some plausibility' (CPR, A61/B86). When general logic is treated as if it were a practical logic, when it serves as an organon, 'science' or 'cognition' is reduced to dialectic, idle chatter. 'Such instruction by no means befits the dignity of philosophy. For this reason it would be better to take this designation of "dialectic" as a critique of dialectical illusion, which is counted as part of logic, and in such a way we would here have it be understood' (CPR, A62/B86). Dialectic as putative critique exists here in response to the use of general logic as an organon – the logic of illusion. The dialectic part of pure and general logic then is the corrective critique that seeks to humble the idle chatter. On the basis of adherence to formal rules, idle talk 'pretends' to meet not only formal but also material grounds of truth, producing 'the semblance of objective assertions.' This semblance is negated by the putative dialectic – formal validity is seen for what it is – a necessary but insufficient condition of truth.

If we compare Kant's discussion here in the *Critique* with those of his logic lectures, we find the same senses of dialectic employed, but not always together. In the *Dohna-Wundlacken Logic* the sense of dialectic as logic of illusion is all that Kant mentions: 'Dialectic is only a logic of illusion. The use of logic is analytical when it is used only as canon, dialectical when it is also used as organon; then it is a logic of illusion and deceives us' (DW, 695/433). In his discussion of dialectic he makes no mention of dialectic as putative correction – dialectic 'is only a logic of illusion.' There is a dialectic that is deceptive, but not a dialectic that is genuine. Like the *Critique*, this sense of dialectic as semblance is also mentioned in the *Jäsche logic*: 'A logic of illusion which arises out of a mere misuse of analytic, insofar as the illusion of a true cognition, the marks of which have to be derived from agreement with objects and thus from content, is fabricated according to mere logical form' (JL, 16/531). It is a fabrication that takes formal validity (composed of the analytic rules of general and pure logic) as guaranteeing the truth of objective assertions or denials. We are sophists to the extent that we take the formal conditions of truth as sufficient conditions for truth by themselves. For Kant, the nature of dialectic in the history of philosophy is largely this logic of illusion. 'In earlier times dialectic was studied with great industry. This art expounded false principles under the illusion of truth.... Nothing can be less worthy of a philosopher, however, than the cultivation of such an art' (JL, 16/531).

In the *Vienna logic* we find a different characterization of what dialectical illusion is and the nature of the dialectical corrective function of general and pure logic. Kant writes, 'What we call dialectic is a means by which one can cognize that something is opposed to the formal laws of the understanding. Consequently it is only a purgative' (VL, 794/254). Here dialectic is a means to recognize the disagreement of thought with its own rules. This self-disagreement is different than dialectic as logic of illusion. And, most importantly the sense of the genuine dialectic is altered, since its function as critical corrective here will be to realign thought with itself. It is a formal error that is corrected for and not the 'semblance of objective assertions.'

Like the *Vienna logic*, the *Jäsche logic* contains the idea of dialectic, 'which would contain the marks and rules in accordance with which we could recognize that something does not agree with the formal criteria of truth, although it seems to agree with them' (JL, 17/532). The genuine dialectical function of logic is not as a corrective for its analytical part being treated as an organon, rather is as a purgative of the semblance of cognition's self-agreement. 'Dialectic in this sense would thus have its good use as cathartic of the understanding' (JL, 17/532). Dialectic as a cathartic/purgative of the understanding is a corrective of the nonagreement of thought with its own rules. This will be contrasted with what I will call dialectic as a putative critique, which aims to show the absurdity of taking general logic as an organon.

In the *Critique*, dialectic as illusory is characterized by the semblance of objective assertion, as sophistry, as taking formal conditions for material conditions of truth. The sense of dialectic as illusory is not associated with thought's own nonagreement with itself. 'General logic, considered as an organon, is always a logic of illusion, i.e., is dialectical...the effrontery of using it as a tool for an expansion and extension of its information, or at least the pretension of so doing comes down to nothing but idle chatter' (CPR, A61/B86). This idle chatter fabricates objective assertions, claims to augment our picture of the world on the basis of merely formal rules of cognition. It creates the illusion of a contribution to objective knowledge, but is nothing but a mirage. Perhaps the reason why the only sense of illusory dialectic that is explored in the *Critique* is the one that takes general logic as an organon, is because Kant did not want to involve himself at such an introductory stage of the transcendental logic with the difficulties involved in explaining how it is possible that thought can be in nonagreement with its own rules. It is also conceivable that Kant assumed it. The third possibility that I can see is that because the function of this section is to prepare the reader for the division of

transcendental logic's analytic and dialectical parts, Kant emphasizes the function of dialectic in general and pure logic as correcting for the error of assuming formal conditions to be sufficient for truth.

There are in Kant two genuine senses of dialectic associated with general and pure logic. While dialectic as purgative/cathartic corrects for moments when thought is not in agreement with its own rules, dialectic as putative corrects for moments when formal conditions (the analytic) are treated as guarantors of material truth. Both senses of dialectic that are 'worthy of philosophy,' involve the idea of semblance. The *Dohna-Wundlacken logic*, *Jäsche logic*, the *Vienna logic*, and the *Critique of Pure Reason* all mention semblance in their discussions of what it is that dialectic responds to. The critical cathartic function of dialectic responds to the semblance of the agreement of thought with itself. The critical putative function of dialectic responds to the semblance of positive objective truth asserted on the basis of mere formal grounds. Combining both senses, we can say that the critical function of dialectic is oriented toward aligning thought with the way it ought to be, and/or humbling thought with a recognition that ultimately there is no universal and material criterion of truth. In either case, the normative element is definitive: dialectic is oriented toward restoring what ought to be the case in the face of what actually is the case, semblance. The purpose of dialectic in this double sense is to restore to thought a humble self-correspondence as the antecedent but merely negative universal condition for objective assertions about the world to be determined as objectively true or false. This is the sense of dialectic as a part of general and pure logic, and as programmatic for the comparable introductory passages on transcendental logic.

(iii) *Universal conditions of truth*

Kant's division of general and pure logic into analytic and dialectic involves the boundary between formal and material truth. This is perhaps the original purpose for his opening discussion of 'the question that drives logicians into corners.' The analytic part of logic provides the formal, negative, and necessary criterion for the validity of any claim that purports to tell us something about the world. Formal validity is the universal condition of truth, but as negative, or merely formal, it is not sufficient by itself. The dialectic is primarily oriented toward a critique of semblance. It involves the critique of cognition that is either at variance with its own rules or takes the formal conditions of truth to be sufficient in themselves. In the *Critique*, the semblance is identified solely with those instances in which logic is taken as an organon. It is

idle chatter, sophistry, and the pretension of knowledge. The semblance of objective assertion or sophistry blurs the boundary between formal validity and objective truth, between a purely analytic formal discipline and the synthetic cognition proper to determinate knowledge. The putative dialectic guides us toward the observance of this boundary, the recognition of the necessity of something outside of the purview of logic for the cognition of positive truth. The purgative or cathartic function corrects for the disparity between thought and its own rules.

(2) Conclusion: logic as frame and the matter of truth

The logic to which Kant has introduced us in the *Critique* is one that is general and pure, and is composed of an analytic and a dialectical part. This is the logic that Kant uses as his 'clue' in the metaphysical deduction of the categories, and it is this logic that I will be using to compare with Kant's transcendental logic.

Kant has recourse to discussions of truth and objective knowledge in order to elucidate the specific nature of general and pure logic. These discussions circumscribe the domain of logic by distinguishing it from other forms of knowledge in the context of the question of truth. The knowledge of the maths and sciences involves directly or indirectly the application of concepts to objects of intuition, pure or empirical. They subsume particulars under universals on the basis of evidence, something that is beyond the business of logic. It is this reference to intuition that provides content for our concepts that can be verified or objectively demonstrated. The determinate cognition of the sciences that is both formally valid (logic) and objectively verified (material correspondence) satisfies both the necessary and sufficient conditions for truth. Metaphysics, like the other sciences, is composed in part of synthetic a priori judgments, yet, because it is cognition from concepts, without possible reference to pure or empirical intuition, it cannot be objectively verified as true or false. Yet regardless of its merit as science, or as a discipline capable of the ascertainment of objective truth, it seeks through synthetic a priori cognition to amplify our understanding of the world.

Logic, in contrast, if it is to have the universality Kant needs it to have, must be abstracted from the domain of givenness (pure or empirical intuition) and more generally the domain of objective cognition. First, logic as general is an analysis of the form of thought independent of the contingencies involved in cognizing a particular object or set of objects. It is not the material sciences – the universality of general logic

is contrasted with the contingency of material truth associated with objects. Second, logic is abstracted from the particular subjective and psychological conditions of a subject. It is not psychology. As a pure general logic, even in its dialectical part, it does not assume thought under the condition of an empirical ego. Kant's discussion of a pure general logic invokes the distinction between how we ought to think and how we actually do think. How we actually think is, here, associated with the effects of memory, inclination and so forth, on thought's fidelity to the rules of its own operation. A pure logic suspends reference to the psychological givenness of an empirical ego and seeks to explicate only those rules applicable to thought without qualification. The domain of general and pure logic is circumscribed by these two negative determinations. Having no direct relation to intuition and the cognition of objects, but representing the formal conditions for the possibility of objective verification, pure general logic is like a frame in which our picture of the objective world is constructed.

Truth requires the formal agreement of thought with its own rules, and the correspondence of its content with the object that is cognized. The material criterion of truth cannot provide us with a universal criterion of truth because it is particular to the object it cognizes – only the formal element represented by logic can offer a universal criterion. But such universality comes at the cost of content – logic cannot contribute anything to our picture of the world. As a negative touchstone of truth, general and pure logic represents the outer courtyard to the sciences – a necessity to which one must consent in order to enter the castle of genuine knowledge.

Kant's discussion of the analytic part of pure and general logic shows that validity is the antecedent/negative condition for truth. The business of the logician is to explicate the formal conditions of truth and to critically purge or putatively correct any of thought's fidelities to semblance. The business of science is to construct the intelligible world and test whether findings (assertions/denials) do or do not correspond to the world. Only after we have seen that a statement complies with the rules of logic is it possible to judge whether that statement corresponds with the objective world.

Logic is a framework within which our picture of the world, if it is to be objective, must 'materialize.' By stepping into the frame of the world (logic), it becomes possible to evaluate and produce determinate cognition of the world that is either objectively true or false. If thought violates the rules of its own use, then it necessarily violates the conditions of intelligibility. This invalidity can be construed as the mark of

being beyond the frame of the world. As such, the thought that is not in agreement with its own rules is nonfalsifiable – it has no status as objectively true or false. Only by satisfying the conditions outlined in logic's analytic part can we say something intelligible and add to this collaborative-constructive picture of the world. Logic seems to be of almost supreme value, since it is by satisfying its conditions that the individual can first gain access to matters of truth.

2

Quantity in Kant's General and Pure Logic

This chapter seeks to develop further our interpretation of Immanuel Kant's treatment of cognition in general and pure logic by focusing on a particular moment of his theory – quantity. This is done to prepare for a comparison of the way in which cognition is treated in logic with the way in which it is treated in the transcendental logic of the first *Critique*. This chapter is divided into an introduction and three main sections. The first main section looks at quantity with regard to concepts, the second with regard to judgments, and the third with regard to inferences. Although the *Jäsche Logic* will be the primary text of analysis, consistent reference will be made to the existing lecture notes taken by Kant's students.

(1) Introduction

The aim of this chapter is to clarify the meaning of quantity for cognition in the context of general and pure logic. At first glance or from the perspective of 'common sense,' one would think that quantity has nothing to do with formal logic. It would seem to be misguided to seek out the meaning of quantity in logic, since, as we have seen in Chapter 1, formal logic is not related to objects. We typically think of quantity as dealing with the answer to questions concerning the magnitude or multitude of some determinate object or set of objects. Since the question of quantity asks after the amount of something, and logic deals with the form of thinking independent of any 'something,' the two seem worlds apart. Logic is independent of the conditions of an object's being given, while quantity seems to deal with a number of real, given objects in the world.

Let us try to emphasize this point further by drawing on some examples. One can attest to there being two dogs in the yard. We can enumerate what is perceived external to us. One could say that one dog

is larger than the other. We can make judgments of more or less on the basis of what is presented to our mind via intuition. One can also verify that there are 100 dollars in a wallet by counting them. We can answer the question as to how much money we have through a process of enumeration based on empirical intuition. We can measure the distance between Ferguson, Missouri, and us and estimate the time it would take to drive there. Through a process of enumeration we can answer questions regarding how far away something is or how much time it would take to get there. We can seek to know how many angles make up a triangle and add them up to come to a determinate answer. These examples show that when one asks the question 'how much?' or 'how many?' one is asking for a count that would be equivalent to the magnitude or multitude of that about which one asks. Quantity then seems to necessarily deal with number and mathematics, as well as objects presented to the mind by intuition.

For Kant, what distinguishes mathematics from logic is the fact that logic is 'formal' and without a relation to objects, while mathematics is cognition from intuition, either pure or empirical (CPR, A713/B741). The question as to how many meters there are between the house and the property line is not a question that would directly be of concern to general and pure logic. But neither is the question as to the square of the hypotenuse, the velocity of light, or the mass of the sun. In being uninvolved with intuition, logic is a discipline radically other than math and physics. Yet logic is similar to metaphysics on this point, insofar as its objects (God, the human soul, or nature as a whole) are not given in intuition. Thus when Kant criticizes pure reason for applying the categories to objects beyond the realm of possible experience, he makes clear that the category 'quantity' has nothing to do with 'objects' that transcend the conditions of empirical or pure intuition. Yet unlike metaphysics, math, and the natural sciences, general and pure logic is not concerned with objects – as a discipline it provides us merely with the formal conditions of truth. And so the perplexity grows – how can quantity be treated in general and pure logic?

The primary thesis of this chapter is that there is a purely logical treatment of quantity that does not deal with number, or involve counting. How can we think of an extension without a numerical value? Again, to the extent that we count something up, or bring it together into a sum, then we have quantified something – we have at the level of content produced information about an object or set of objects existing within what in the previous chapter we called the frame of the world. Quantity in the context of logic is without such objective or determinate content.

Kant's discussions of quantity in the context of general and pure logic make reference to *extension* that we must think of as not enumerable. The following gives an account of Kant's treatment of quantity in general and pure logic that focuses on the fact that it consists of an extension that is not countable.

(2) Concepts

Concepts are the first of the elements proper to the content of general and pure logic. Kant's discussion of the extension of a concept is based on the form/content distinction. In regard to content a concept can be said to have great extension when it has significance or implications for other concepts. Copernicus' conception of the earth orbiting around the sun had great consequences at the level of content for seemingly the whole of human cognition. A merely formal or logical analysis of concepts involves a different kind of extension.

In the determinate cognition of mathematics or natural science, cognition is the synthetic unity of a concept of the understanding and a manifold presented by intuition. The intuition is subsumed under the concept and is as much an essential element in the cognition as are the concepts. In general and pure logic, however, the only subsumption we can speak of is that of one concept by another. There is nothing beyond the concept except another concept – the extension would be, as it were, intraconceptual. By treating subsumption and thought in this way general and pure logic maintains itself as independent of the ground of material truth, preserving its status as a merely negative touchstone of truth.

This is why when we speak of the extension of a concept in logic, we are in no way speaking of that concept as being useful for illuminating aspects of the world in which we live. General and pure logic is not conditioned by time or space and as such treats the relations of concepts without an a priori relation to intuition. When it treats of extension, it is an extension independent of time and space – it is extension without an object. It is as though extension in logic is 'abstract,' while extension even in pure mathematics is concrete because it has an a priori relation to intuition and determinate content.

(A) The extension of concepts

Kant defines the extension of a concept by its capacity to act as a ground for other concepts. The extension of a concept as a ground for other concepts is its specific universality or sphere (JL, 95/593). A concept is

said to be universal relative to the concepts that it contains under itself. It extends to them since they include within themselves this larger or broader or universal concept. 'The extension of a concept is a *sphaera*, and it is concerned with the multitude of things that are contained under the concept' (VL, 911/354). A formal treatment of the extension of concepts pertains to what is contained 'under' the concept, while the analysis of the extension of a concept in terms of its content pertains to what is contained 'in' the concept as a part of it. The universal contains the particular under itself, and the particular contains the universal in itself. 'The universality or universal validity of a concept does not rest on the fact that the concept is a partial concept, but rather on the fact that it is a ground of cognition' (JL, 95/593). As ground the concept is contained within those that are subsumed under it. As such the partial concepts are specifications or exemplifications of that under which they are subsumed. By 'being contained under it,' Kant means that the concepts that are subsumed always presuppose and are the expressive specifications of that under which they are subsumed. 'The more things that stand under a concept and can be thought through it, the greater is its extension or sphere' (JL, 96/593). The formal extension or sphere of a concept concerns the multitude of concepts that are thought through it, independent of any reference to what these concepts are concepts of.

In section 7 of the *Jäsche Logic*, Kant thematizes this relation between the content and extension of concepts. In doing so he associates content with the representation of things, and the extension of a concept with the formal subordination of one concept under another. 'Every concept, as partial concept, is contained in the representation of things; as ground of cognition, i.e., as mark, these things are contained under it. In the former respect every concept has a content, in the other an extension' (JL, 95/593). This passage makes clear that an analysis of the extension of concepts is opposed to one of content. When we look at concepts formally, we look at the way in which they serve as a ground for what is contained under them, and are grounded by what they are contained under. This is analogous to the way in which a treatment of concepts as ground is opposed to a treatment of concepts as partial concepts. If we are to investigate a concept as a ground of cognition, then we are seeking after its extension, something that Kant identifies as the universality of that concept. Partial concepts are associated with the representation of things, but this should not be interpreted such that the role concepts play in cognition is not independent of other factors, such as space and time, or intuition. Whether the partial concept represents an object presented through intuition or discursively, it still uses the concept to

represent something other than itself. It is representations as such, and not representations of particular things given in intuition, with which we are concerned here: 'We consider the concept as to content when we look to the multitude of representations that are contained in the concept itself' (VL, 911/354). This is coherent with Kant's stress on the fact that the greater the universality of the concept, the more it subsumes, and the less that it can claim as regards content: 'The larger the *sphaera* that a *conceptus communis* has, and the more it contains under itself, the less is contained in it' (BL, 258/206). The more universal a concept, the more it contains under itself, but the less it contains within itself. 'The greater the extension of a concept, the smaller is its content, i.e., the less it contains in itself' (VL, 911/354). The more abstract and universal a concept, the more that concept serves as a ground for other concepts. 'The more the things that stand under a concept and can be thought through it, the greater is its extension or sphere' (JL, 96/593). For a concept to serve as a ground is for a concept to be that through which a multitude of things can be thought. A concept with extension can thus serve as a ground for a multitude of partial concepts, which represent things. An extreme concept, such as '*something*' has the greatest extension, since everything that is thought is thought through it. Yet the concept of *something*, although it has the greatest extension to a multitude of things, is the most extremely deprived of content, since the concept of something ultimately can indicate nothing. 'The content and extension of concepts stand in inverse relation to one another. The more a concept contains *under* itself, namely, the less it contains in itself, and conversely' (JL, 95/593). The sphere or extension of a concept is constituted by what is contained 'under' a concept, and not what is included 'in' a concept. 'The multitude of things that are contained under the concept is called the logical *sphaera* of the concept' (DW, 755/488). So when Kant is speaking of the extension of concepts, it is clear that he is not speaking of the content of cognition, and that he is not talking about what is contained within a concept, but is rather speaking of the way in which the spheres of concepts are subordinated to one another: 'The logical *sphaera* always grows, as a leaf of gold stretches when it loses in thickness, and just on this account is it so hard for men to go to the heights and to think things without content. The closer that concepts come to experience, on the other hand, the fuller or more concrete the representation is' (VL, 912/355). A cognition that contains much in regard to content comes closer to experience than a more abstract concept, but thus occupies a lower sphere. The smaller the sphere of the concept, the more that is contained within the concept – the more it is a

specification of. Such a concept contains much within itself and it gives more information about the world, while a concept that contains much under itself is like the stretched gold leaf, broad in its application, but thin when it comes to material content and detail.

The sphere of a concept in logic is determined by all those concepts that contain it within them and which it thus contains under itself. 'The universality or universal validity of a concept rests rather on the fact that it is a *ground of cognition*' (JL, 95/593). The logical treatment of extension as the universality of concepts does not rest on the content of the concept, but is confined to the function of concepts as ground. This only serves to show that the logical treatment of the extension of concepts as ground presupposes that for which the concept functions as ground, namely, the representation of things:

As one says of a ground in general that it contains the consequence under itself, so can we also say of the concept that as ground of cognition it contains all those things under itself from which it has been abstracted, e.g., the concept of metal contains under itself gold, silver, copper, etc. For since every concept, as a universally valid representation, contains that which is common to several representations of various things, all these things, which are to this extent contained under it, can be represented through it. And it is just this that constitutes the usefulness of a concept. The more the things that can be represented through a concept, the greater its sphere. Thus the concept *body*, for example, has a greater extension than the concept *metal*. (JL, 96/594)

The sphere of a concept is determined by the concepts that are 'contained under it,' and 'can be represented through it.' Partial concepts exemplify the concepts under which they are contained, because through the deployment of the concept in the cognition of a determinate thing, something beyond the concept is represented through that concept. 'And it is just this that constitutes the usefulness of a concept.' The logical treatment of the extension of a concept does not look at what the concept represents, its usefulness, but rather what concepts it is contained under or it contains. The universality of a concept is the delimitation of the extent to which that concept serves as a ground for other concepts.

(B) Conclusion

The sphere of a concept is constituted by relations of subsumption. The extensive quantity of a concept is its capacity to act as a ground for other concepts in general and for partial concepts in the representation

of things, either intuitive or discursive. Relations of subsumption obtaining between concepts constitute what can be called the extension of concepts. Extension in logic is not countable since as a property of a concept taken as ground, it only ever serves as a form through which determinate things can be thought. It is merely part of the frame of the world and not something that can be measured within that frame.

(3) Judgment and extension

This section is divided into two parts, one part on judgment in general and one part specifically on the function of quantity in judgment. Both sections analyze accounts Kant gives throughout his career as a lecturer on the subject of logic, focusing both on (a) precritical and (b) early and later critical lecture notes. As mentioned above, the *Jäsche Logic* is a special case because it was assembled by Gottlob Benjamin Jäsche at Kant's request, and so is not just the text of a single set of lecture notes but includes Kant's own notes in his version of Frederick Meier's textbook, and draws from a number of different sets of lecture notes. It is also special because of its fidelity to certain architectonic commitments of the *Critique of Pure Reason* that are not maintained in other lecture notes.

In the second edition of the first *Critique* Kant expresses dissatisfaction with the definitions of judgment that have been given by logicians. 'I have never been able to satisfy myself with the explanation that the logicians give of a judgment in general: it is, they say, the representation of a relation between two concepts' (CPR, B141). He complains first that the definitions of judgment proffered by logicians typically only apply to categorical judgments and not to disjunctive and hypothetical judgments that establish the relation of two judgments, not two concepts. Kant even complains about the traditional definition of the categorical judgment, claiming that the relation obtaining between concepts, which is supposed to be represented in the judgment, is left undetermined. What Kant is dissatisfied with here is the extent to which logicians have failed to account for the 'how' of the relation of concepts: 'If, however, I investigate more closely the relation of given cognitions in every judgment, then I find that a judgment is nothing other than the way to bring given cognitions to the objective unity of apperception' (CPR, B141). Here, what Kant finds dissatisfying about the traditional logical definition of judgment is rectified by accounting for the relation of concepts through the unity of apperception. The inadequacy of logic rests upon its not being transcendental philosophy.

In general, Kant finds a number of different ways to account for the how of judgment that has been highlighted by some of his most rigorous contemporary readers. Henry Allison, in his work *Kant's Transcendental Idealism*, writes, 'One of the main problems, however, confronting any interpretation of Kant's theory of judgment is that he defines "judgment," meaning both the act and the product, in a wide variety of ways, especially in the various extent versions of his lectures on logic' (68). Beatrice Longuenesse, in her work *The Power of Judgment*, traces three different approaches to judgment that she finds operative within Kant's theoretical work. Each particular approach accounts for the inadequacy of the traditional logical definition of judgment in a slightly different way. The first definition of judgment that she cites is the one developed at by Kant at B141, just cited above, namely a definition of judgment that appeals to the objective unity of apperception. It is no surprise, perhaps, that what Kant finds dissatisfying about the logicians' definition of judgment is precisely what is central or unique to his own philosophy. The second approach to the problem of the *how* of judgment concerns principles of concept subsumption, is aligned with what I will be calling a purely formal definition of judgment. Although this definition is less directly a response to how the relation of concepts in judgment is possible, it does at least determine what the relation of concepts in judgments is. The third approach Longuenesse cites is one in which judgments are treated as rules, having as their end their function in syllogisms. In the same way that concepts are to be the material for judgment, so judgment becomes the material of syllogism. Longuenesse stresses that each of these three scenarios represents different aspects of a single and consistent theory of judgment. Allison remarks that there are a multitude of different approaches to judgment to be found in Kant's work, two of which he proceeds to develop and highlight. The first thing Allison notes is the approach to the problem of judgment in terms of its relation to intuition, and the second is an approach to judgment as made possible by the objective unity of apperception. In both accounts something beyond the boundaries of general and pure logic is brought into the picture in order to define judgment. Allison weaves together texts from Kant's lectures on logic and the transcendental logic of the first *Critique* to give an account of judgment that is helpful in offering secure guideposts of interpretation, but that can be of no help to us in giving an account of judgment that would stay within the boundaries of the general and pure logic I outlined in Chapter 1. Both Longuenesse and Allison are aligned in the perception that Kant seems to be working with a single definition of judgment that appears different, and even

contradictory, relative to the context of its appearance. Yet both can only find such an idea of judgment by recourse to the content of the transcendental logic.

The following section is an analysis of Kant's approach to judgment in the context of general and pure logic. By staying within the province of pure and general logic, we will show some of Kant's own difficulties in defining judgment from a purely logical standpoint. Yet it will be shown that an adequate definition of judgment can be given within the province of logic alone.

(A) Judgment

When we look at the logic lecture notes that take up judgment directly, we find that most often the 'critical' Kant approaches the definition of judgment in two ways. These two ways figure most prominently in his lectures on logic, although they are also to be found in his theoretical writings in general. This twofold approach figures most prominently in the 'critical' period of Kant's work. One approach defines judgment as the relation of two or more concepts. This is the definition that is more in keeping with the general and pure logic. It is also the definition with which Kant expresses dissatisfaction at B141 of the first *Critique*. The second approach to judgment makes reference to self-consciousness as the ground from which the relation of concepts is possible. This approach accounts for the possibility of the relation of concepts that logicians had traditionally presupposed. To account for this presupposition, Kant has to introduce arguments from the transcendental logic into his logic lectures. This reference to consciousness to account for the relation of concepts is characteristic of what is called the critical stage of Kant's work. But this is not to say that there is perfect consistency throughout the critical period of Kant's writings, especially with regard to how the relation of concepts is to be accounted for in a purely logical definition of judgment.

The following begins with a look at the way in which the 'precritical' Kant approaches the definition of judgment, and then moves to those lectures characteristic of Kant's critical stage. This allows us not only to notice the changes of tone, vocabulary, and content but also the consistencies in certain of Kant's epistemological commitments.

(i) *The Bloomberg Logic*

The Bloomberg lectures were given in 1770 and fit into what is called Kant's precritical stage. This can be a misleading classification to the extent that it posits two distinct stages in Kant's work. It is true that

these lectures and their vocabulary are situated more directly in continuity with the tradition of post-Cartesian epistemology and logic. But it is also true that they contain within them subtle positions that continue to develop and crystallize in the critical period of his thought.

The *Bloomberg Logic* of 1770 appears to follow Meier's text and unfolds according to the tradition of logic epitomized by Christian Wolff and Alexander Gottlieb Baumgarten. Its treatment of judgment begins thus: 'To cognize distinctly is to cognize everything by means of a clear mark. But to cognize something by means of a clear mark is also to judge.' (BL, 273/220). Kant defines judgment with the vocabulary of marks, clarity, and distinctness. Judgment is the cognition of a subject through that which is a distinguishing mark of it: '...in a judgment one represents the predicate as the ground of the distinctness of the subject' (BL, 274/221). A judgment thus makes clear what is particular about a subject by virtue of its being included or excluded under the predicate concept. To think a subject with clarity would then mean to subsume the subject under such a predicate as would distinguish that subject from others. In the *Bloomberg Logic*, the clarity of cognition can be either extensive or intensive. Extensive clarity concerns 'the multitude of coordinate marks which are cognized in a thing immediately' (BL, 128/100) and is associated with the content of cognition. Intensive clarity 'rests on subordinate marks' (BL, 128/100) and is associated with the form of cognition. This, Kant claims, requires reason, 'because in this case we infer and derive one mark from the other.' Extensive clarity means the field constituted by the multitude of marks that are immediately connected in the thought of a thing. Judgment in this case can be seen as coordinating concepts, when it judges on the basis of extensive knowledge of the multitude of attributes or predicates that belong immediately to the object. The extensive clarity that is requisite for coordinate judgments rests on acquaintance with the object, and is not only associated with content but also with the sensible and intuition. Coordinate judgments rest on the comparative equality of two concepts with respect to an object referred to. On the other hand, intensive clarity concerns mediation and reason, and is not therefore tied up with the idea of the givenness of an object. Reason here is associated with the subordination of marks through purely formal operations of derivation, which thus go beyond the immediate to what Kant and Meier call remote marks. In the judgments of subordination, a higher concept is in relation with a lower concept, while in coordinate marks, the concepts occupy the same sphere, or can be said to be coordinate because they are all equally subordinate to the thing of which they are predicates. Based on this

division Kant will claim that the clarity proper to general and pure logic is intensive. Intensive clarity concerns the subordination of concepts to one another in judgment. To cognize a subject with clarity is to subsume it under a predicate that is a higher concept. The precritical Kant uses the distinction between intensive and extensive clarity to give an account of the subsumption of concepts in judgment. Thus the account of judgment is focused on operations of subsumption couched in the precritical post-Cartesian discourse and epistemology.

(ii) *The Vienna Logic (early 1780s)*

The *Vienna Logic* (early 1780s) is situated right in the midst of Kant's remarkably productive critical period. Herein is presented a twofold articulation of judgment: 'A judgment is *generaliter* the representation of the unity in a relation of many cognitions. A judgment is the representation of the way that concepts belong to one consciousness universally, objectively' (VL, 928/369). The first sentence of the definition contends that judgment in general is the representation of the unity of distinct cognitions. This would make of judgment the formation of complex cognitions. The second sentence of the definition brings consciousness into the picture as the ground whereby the relation of distinct concepts is possible. When consciousness comes into the picture, so too does the problem of objectivity. It would seem that the two sentences correspond to two different approaches to judgment. One tends to stay wholly within the domain of general and pure logic, and the other seems to go beyond the purview of logic through its reference to consciousness. The entrance of consciousness into Kant's lectures on logic, especially in his discussion of judgments gives us a good clue as to the natural interstices of general and pure logic and the transcendental logic of the first *Critique*.

The following passage from the *Vienna Logic* seems to stay within the boundaries of formal logic, because it does not go beyond concepts to the consciousness for which they are concepts. Yet, there is an element in this quotation that gives us a hint at the value of the transcendental philosophy of the first *Critique* for formal logic:

If one thinks two representations as they are combined together and together constitute one cognition, this is a judgment. In every judgment, then, there is a certain relation of different representations insofar as they belong to one cognition. E.g., I say that man is not immortal. In this cognition I think the concept of being mortal through the concept of man, and it thereby happens that this

cognition, which constitutes the unity of two different representations, becomes a judgment. (VL, 928/369)

The account of judgment that stays within the boundaries of pure and general logic emphasizes that concepts are brought together in the form of a unity in judgment. When this happens, Kant says, a cognition 'becomes' judgment. 'I think the concept of being mortal through the concept of man and it thereby happens...' By thinking one concept through another, by establishing the subordinate relation of two concepts, judgment happens. Allison stresses the meaning of the act of judging as over and against the product of this act. Formal logic focuses on the judgment, its form and elements. Transcendental logic on the other hand will look at the event of judging and give an account of how this is possible. It is the problematic of the event of judging that is the terrain of transcendental logic.

(iii) *The Dohna-Wundlacken Logic*

Otfried Höffe, in his broad overview of Kant's work titled *Immanuel Kant*, shows the way in which the critical period of Kant's work is marked by a shift in terminology: 'In the end the vocabulary of the first *Critique* has changed considerably in comparison to the precritical period' (21). Yet Höffe does not mention the way in which this shift of vocabulary also preserves elements of the precritical discussions. Both the post-Cartesian tradition of logic and what we might suspect as the emerging voice of German idealism find a place within the *Dohna-Wundlacken Logic* (1792). This discussion of judgment brings together both the language of marks, clarity and distinctness, and the language of consciousness. For instance, Kant states, 'The representation that is universal through its consciousness as the representation of a mark is a clear concept. The consciousness of a universal representation is called not merely a concept, then, but a clear concept. A concept that becomes clear through a judgment is called a distinct concept' (DW, 762/495). The treatment of judgment in the *Dohna-Wundlacken Logic* weaves together both precritical and critical vocabulary. In these lectures, Kant is able to bring back to a certain prominence the language of the precritical period, without jeopardizing the victories the critical philosophy has won. Yet it is important to note how he is only able to do this, insofar as he goes beyond the boundaries of pure and general logic. It is not that the critical period marks a shift in Kant's philosophy of logic. The theory of logic stays the same, but the way in which it is accounted for changes.

Here Kant claims that judgment involves the clarity and the distinctness of a concept. A clear concept is made distinct through judgment. No mention is made here of intensive and extensive clarity, although the meaning Kant gives to distinctness is similar to the meaning he gives to intensive clarity in the *Bloomberg Logic*. A clear concept is the representation that follows from the consciousness of a representation being taken as a mark, or a ground of a thing. Judgment thus still has the function of distinguishing a subject concept from others by its being subsumed under a predicate concept, but it does so by bringing into the judgment the clarity that was already there in consciousness – judgment *happens*. If clarity is the consciousness of a representation as a mark of a thing, and this becomes distinct through judgment, which rests on relations of subordination, then we can see the *Dohna-Wundlacken Logic* as supplementing and refining his earlier theory of judgment through reference to consciousness.

But we can also find in these lectures a definition that does not stray beyond the boundaries of general and pure logic. 'A judgment is the representation of the relation of concepts among one another, through which a cognition becomes distinct' (DW, 763/496). Like in the *Bloomberg Logic*, judgment is the representation of the relation of concepts, and it is through a judgment that cognition becomes distinct. One possible way to interpret this is to suggest that the clarity of concepts is prior to their distinctness. The distinctness happens or emerges when one passes from the consciousness of the representation as a universal mark to the representation of that universality in a judgment. But this interpretation could never be ventured by the logician proper, since this would step beyond the purview of general and pure logic. The rules of the logician outlined in Chapter 1 would be violated by such a usage. Such discussions are reserved for other disciplines, specifically transcendental logic.

A consistency between the Bloomberg and the Dohna-Wundlacken lectures that is significant is that the logical treatment of judgment ultimately concerns the subordination of concepts: 'Judgment is the representation of the unity of given concepts, insofar as one is subordinated to the other or excluded from it' (DW, 762/495). This definition is a simple one that reasserts that a judgment is the representation of the unity/relation of concepts. Judgment involves the extension or sphere of concepts, insofar as they are unified by a relation of subordination. This is what I will call the 'logical definition of judgment,' and this is consistent with what Kant claims in the Bloomberg lectures, namely that judgment in logic is to be defined by intensive clarity. Despite terminological shifts, when Kant stays within the limits of general and pure

logic, he is consistent in defining judgment as the relation of subordination obtaining between concepts.

Although there are commonalities between the Bloomberg and the Dohna-Wundlacken accounts of judgment, there is a divergence that corresponds to Kant's Copernican revolution. This divergence is found mainly in the definition of judgment in terms of the unity of apperception and consciousness. The critical/Copernican turn involves the transcendental deduction that grounds all cognition in functions of syntheses made possible by the transcendental unity of self-consciousness. In the Dohna-Wundlacken lectures, as in the first *Critique*, consciousness is the cornerstone of the definition of judgment. The inadequacies of the logical definition of judgment are overcome by reference to the argument of the transcendental logic. From Kant's standpoint, at this time one can say that the consciousness of a representation as a universal mark happens through judgment: 'A concept that becomes clear through a judgment is called a distinct concept' (DW, 762/495). Even though there is no reference to consciousness in this passage, we have seen that Kant's understanding of clarity implies that it is consciousness through which the universality is possible. It is the consciousness of this universality that becomes distinct in judgment. Therefore, the Dohna-Wundlacken discussion of judgment is in keeping with the transcendental definition of judgment, insofar as the unity of consciousness makes possible the relation of concepts that formal logic presupposes. It is important to note, of course, that even though it starts to look like Kant brings the elements of transcendental philosophy into the discourse of logic, what remains distinct is the absence in the logic lectures of any relation in judgment of consciousness to intuition. Kant is consistent in maintaining that logic has no relation to a given content provided by intuition.

We have seen that the *Dohna-Wundlacken Logic* contains elements of both the precritical and the critical stages of Kant's philosophical development. Included with the Dohna-Wundlacken discussion of judgment is reference to consciousness. This reference helps us understand how this relation of concepts in judgment is possible. We see, therefore, instances in the Dohna-Wundlacken lectures in which the transcendental path of the first *Critique* seems to intersect or share an edge with the elucidation of logic. This is not to say that the transcendental philosophy of the first *Critique* is in full force in these lectures. There is a limit to the extent to which the transcendental discourse encroaches upon the purely logical. The definition of judgment that marks a divergence from the purely logical, does bring in the language of consciousness, apperception, but it does not involve itself with the problem of intuition.

(iv) *The Jäsche Logic*

The *Jäsche Logic* begins its treatment of judgment with a definition that offers two perspectives. These two perspectives mirror those two definitions outlined in the *Vienna Logic*. These two perspectives are separated by an 'or,' which I believe implies that judgment can be taken up in two ways. I believe one way is more in keeping with general and pure logic and that the other way is more characteristic of the transcendental logic of the first *Critique*. The way in which general logic is taken up, however, has changed with respect to the *Vienna Logic* because some of the post-Cartesian vocabulary has dropped out.

Longuenesse, in her reading of these definitions in the *Jäsche Logic*, unifies these two perspectives. This is reasonable since 'or' can also indicate a certain equivalence or compatibility between two definitions. 'Or' can be synonymous with 'in other words.' It is, however, notable that she, like Allison, is reading the *Jäsche Logic* in conjunction with serious interpretive difficulties originating in the *Critique of Pure Reason*, which, as I suggested before, inclines/leads both interpreters to interpret the 'or' as 'in other words.' Specifically, I find that both interpreters bring the problem of intuition into the *Jäsche Logic*'s discussion of judgment – something that, if Kant confined himself to the parameters of general and pure logic, he would not do so. I will confine myself to the *Jäsche Logic* and try to interpret the 'or' as marking two distinct approaches.

Kant writes, 'A judgment is the representation of the unity of the consciousness of various representations, or the representation of their relation insofar as they constitute a concept' (JL, 101/597). The first definition establishes the unity of various representations through consciousness, and it is this unity that is then represented in a judgment. In this case consciousness functions as the ground from which the unity of various representations can be grasped in a judgment. In the language of the Bloomberg and Dohna-Wundlacken lectures we would say that the clarity of a concept in consciousness becomes distinct through a judgment. The second definition of judgment, 'the representation of their relation insofar as they constitute a concept,' claims that the unity of the representations is to be located in the relation of representations with the condition that they constitute a concept. Based on certain interpretive investments, Allison claims that this part of the *Jäsche* definition implies that judgment is the formation of a complex concept, one that is constituted by a relation of representations that includes a relation to intuition and an access to objectivity thereby. If the relations of representations can be limited to functions of inclusion/exclusion of the respective spheres of concepts, then judgment represents

the relation of the spheres of the two representations. Representation then comes to be another name for concept. This seems questionable, however, because only concepts, and not representations of things, can have spheres in the context of pure and general logic. I would prefer to interpret this part of the definition as saying that judgment concerns the unity of various representations, insofar as each representation can be taken as a concept. To understand judgment as having to do with the relation of concepts is an interpretation more in keeping with what I am calling the purely logical definition of judgment, and is one more closely related to what we described as the precritical approach to logic. To think that judgment in the context of general and pure logic would treat of particular representations would be contradictory. It is perhaps a more satisfying interpretation to say that a logical treatment of judgment deals merely with concepts and leaves the problem of how representations *become* concepts to another inquiry, namely transcendental logic. Thus, the consciousness of the representations as universal is presupposed in formal logic.

Although the *Bloomberg Logic* of 1770 is consistent with the Jäsche, Vienna, and Dohna-Wundlacken lectures in claiming that the logical treatment of judgment is merely formal, the Bloomberg lectures make no reference to consciousness to give an account of the form of judgment. The *Jäsche Logic* does make this claim: 'The form of judgments consists in the determination of the way that the various representations belong, as such, to one consciousness' (JL, 101/598). The definition of judgment as the representation of the unity of the consciousness of various representations is a broader definition of judgment. This definition extends to and beyond the logical one, since it also applies to mathematics, natural sciences, and ultimately practical and aesthetic philosophy as well. The broader definition reads more like the first *Critique*, in which it is the condition of consciousness that must be accounted for if we are to understand how the relation of concepts is possible. The narrower definition would be the one that stays within the boundaries of pure and general logic. This definition would be that judgment is the representation of the unity of the spheres of given concepts in relations of subordination. In both cases the unity of various representations is still a relation of inclusion/exclusion and subordination of spheres, and in both definitions it is the unity of the relation that is that which the judgment represents. It is also true for both definitions that judgment *represents*. In one case judgment is the representation of the unity of consciousness of various representations, and in the other case judgment represents the formal relations of subordinate concepts.

The purely logical account thus presupposes the possibility of the relating of concepts, while the transcendental account of judgment gives an account of the possibility of the relation of representations that form concepts. The 'or' that we have interpreted as implying two distinct approaches suggests that Kant is for the most part comfortable in offering two accounts of judgment: one logical and the other transcendental. There are also instances in which the boundaries between these two accounts become indistinct, and one finds Kant as it were shuttling between these two paths in an attempt to provide a complete account of what general and pure logic takes judgment to be.

(v) *Summary*

If we go back to the first definition of judgment that Kant gives us in the Jäsche logic, 'a judgment is the representation of the unity of the consciousness of various representations, or...' (JL, 101/597), we see that the unity of the consciousness of various representations is represented in or by judgment. A judgment is secondary to the conscious unity of various representations under a concept that it represents. This seems to suggest at least the epistemological primacy of consciousness of the unity of various representations, and the epiphenomenal status of judgment. Judgment represents the unity that is already established by consciousness. What seems interesting here is the way in which judgment can be seen to be the natural fulfillment of the consciousness that it represents. If we look at the other approach Kant takes to judgment, 'the representation of their (various representations) relation insofar as they constitute a concept' (JL 101/597), this definition does not involve itself with consciousness as that from which the unity is to be attained. Instead I would argue this definition stays within the bounds of general and pure logic by stating merely that judgment as representation is the representation of the relation of representations insofar as they are taken as concepts.

Logic assumes representation in such a way as to justify the givenness of concepts. The givenness of representation is the presupposition or antecedent condition for any of the moments so far considered within pure and general logic, horizons, concepts, and judgments. Logic, if it were to deal directly with representation, would concern consciousness, time, and space, while logic proper deals only with the relations of concepts in judgments. Logic takes concepts as given – yet, sometimes Kant gives an account of the way in which the relation of concepts in judgment is possible. This 'giving an account' speaks about the unity of various representations through consciousness. Various consciousness and the unity of apperception are named as the condition through which

judgment is possible, but they themselves are not given an account of in the disciplinary context of general and pure logic. Thus, all the conditions that follow from consciousness like time, space, and the categories are in no way taken up in these lectures, nor are they taken up in the sections from the introduction to the transcendental logic analyzed in Chapter 1. However, in the lectures, the conceptual apparatus of the *Critique* occasionally becomes evident when addressing the problem of the 'how' of judgment. It is as if Kant the philosopher cannot help but supplement a purely logical account of judgments with that of a transcendental one.

The treatment of judgment that is consistent with general and pure logic as outlined in Chapter 1 is the representation of the relation of concepts. We also know that since general and pure logic does not concern the content of judgment, and deals only with the extension of concepts insofar as they constitute a ground of cognition, a judgment in logic is the relation of grounds. This relation of grounds is one of logical subordination. That which is contained under a concept is that concept's sphere. Thus, for a logical treatment of judgment we are not directly involving consciousness, but we are still accounting for the unity of various representations; however, we are doing so at the level of the concept. It is the subordination of one concept to another that is represented as a unity in judgment. The origin of the representation and how the relation is possible in the first place are reserved for another inquiry.

(B) Quantitative judgment

Judgment in the context of general and pure logic is the representation of the subsumptive relation of given concepts. By turning now from a definition of judgment in general to an analysis of the particular function of quantity in judgments, we hope to elucidate and stress the way in which extension in the context of general and pure logic has nothing to do with what is countable.

The *Bloomberg Logic* follows tradition by dividing judgment as to quantity into universal and particular. Although Kant makes reference to singular judgments, he follows tradition by treating them as a species of universal judgments. In contrast, those lectures that can be dated as following after the publication of the *Critique of Pure Reason* are all consistent in dividing judgment as to quantity into three moments: universal, particular, and singular. The following section analyzes how Kant justifies the threefold division of the functions of judgment in quantity.

Kant takes up a tradition of logic that equates singular and universal judgments. Kant's early or precritical lectures on logic show him conforming to tradition by claiming that universal and particular are the only two functions of quantity in judgment. Here, singular judgments are simply a mode of universal judgments. The later lectures on logic affirm the singular judgment as justifiably a third function of quantity in judgment, which can only secondarily be identified with the universal judgment. It is evident from within the lectures that in the critical period, Kant defends the idea that each division of judgment (quantity, quality, relation, mode) has within itself three moments. This consistency of division is significant for the overall architectonic ambition of the first *Critique*. The later logic lectures thus display Kant securing the grounds of that from which so much was drawn in the first *Critique*.

As our analysis progresses, what will become more and more noticeable is that Kant goes beyond the boundaries of his pure and general logic precisely when it is a question of justifying his lifting of singular judgment into the status of a distinct logical type. The arguments of the transcendental logic *encroach* upon the logical treatment of judgment when it becomes necessary for Kant to give a justification of singular judgments as a distinct kind of judgment. Such encroachments betray Kant's desire to justify in his logic the assumptions of the *Critique of Pure Reason*.

(i) Introduction

In the *Jäsche Logic*, only one section/paragraph is given to quantity as a function of judgment. It can be said that the quantitative function in judgment is not problematic for Kant. It is something that he feels can be defined and elaborated briefly, accurately, and without hesitation. This is not to say that his treatment of the quantity of judgments is articulated without care and attention. But it is to say that we cannot afford to be as quick as Kant is through these passages.

(ii) The Bloomberg Logic

The Bloomberg lectures treat the problem of the quantity of judgment quickly and succinctly. The primary division of this function of judgment is into universal and particular. 'All judgments are either universal or particular. It is universal if the nota of the subject is contained in the *sphaera* of the predicate either completely or not at all.... A particular judgment, however, is one where the nota of the subject is contained or not contained, only partly under the *sphaera* of the predicate' (BL, 275/221–2). Universal judgments affirm or deny that the whole of the subject concept is or is not included under the predicate concept.

Particular judgments only partially subsume the subject concept in the predicate concept. It is as if the spheres of two concepts were only partially overlapping.

The Bloomberg lectures seem to be the most traditional of the available lecture notes in stressing that in logic there is no justification for the idea of the singular judgment as a separate function of judgment. This is to say that only the universal and particular judgments are strictly differentiated within formal logic. Singular judgments are subsumed under universal judgments: 'for as regards singular judgments, or those where the subject is an *individuum*, these are included among the universal judgments' (BL, 275/222). Kant argues that both universal and singular judgments have the characteristic of being either wholly affirmative or wholly negative. Kant identifies singular and universal judgments through the fact that both necessarily judge the subject concept to be entirely inside or outside of the predicate concept. It is on the basis of this trait that the singular judgment is contained under universal judgments. What the Bloomberg lecture notes thus show is that within logic the singular judgment is not recognized as an independent operation of cognition or function of the understanding as it appears in judgment.

(iii) *The Vienna Logic*

The *Vienna Logic* begins its treatment of the functions of judgment with this statement: 'All actions of the understanding that appear in a judgment reduce to four, and all judgments are considered according to these' (VL, 929/369). These are quantity, quality, relation, and modality. The *Vienna Logic* distances itself right away from the Bloomberg lectures in speaking of the four kinds of judgment as corresponding to four operations of the understanding. This correspondence reminds us right away of the first *Critique*, and the regressive analysis of the metaphysical deduction – the movement from judgment types to the pure concepts of the understanding that make them possible.

There are two distinct passages in which Kant explicitly takes up the element of quantity in a judgment. The first passage is interesting because in it Kant distances his own discourse from that of the logician. He states that the distinction between singular and universal judgments must be made from 'the beginning.' Kant does acknowledge that 'one can say afterwards...' that singular judgments are contained under universal judgments. The important point about this first passage is that Kant takes issue with the tradition of logic in asserting the legitimacy of a third moment in the function of quantity in judgment: 'As to quantity, our judgments are divided into universal, particular, and

singular judgments, and even if the logici show that as far as the matter is concerned, singular judgments amount to universal judgments, a singular judgment is nonetheless distinct from universal ones, and this must be distinguished at the beginning, although one can say afterwards that singular judgments belong to the universal ones' (VL, 929/369). Kant begins by dividing the function of quantity in judgment into three kinds, universal, particular, and singular. Kant begins by distinguishing himself from the logicians. He begins to differentiate his perspective than those in conformity with the history of logic. Kant recognizes the formal identity of the universal and singular judgment, which he understands as at the bases of the inclusion of the singular judgment under the universal in traditional logic. This recognition was already clear in the Bloomberg lectures in which it merited declining the singular judgment as a third function of quantity in judgments. Here, however, Kant differentiates his discourse from that of the logicians right away by claiming that despite formal identity, singular and universal judgments are differentiated at the level of the acts of the understanding. 'The *actus* of the understanding are obviously different, although one sees that the one use of the understanding holds as much as the other' (VL, 929/369). It is as though Kant is saying that from within the confines of formal logic, there is no difference. Yet from another, perhaps more philosophical or transcendental perspective there is an essential difference that is missed by a merely formal analysis. Kant makes reference to the acts of the understanding in order to supplement and ground a purely logical account of the difference between universal and singular judgments.

The *Vienna Logic* gives us a second account of the logical function of quantity in judgments (VL, 931/371). It repeats the first by initially dividing the function of quantity into three judgments, and by giving definitions for each of them, which are much the same as those he gave in the earlier section. He then gives examples of each, and their Latin names. From there, however, Kant immediately turns to the problem of the status of the singular judgment: 'In every *judicium singulare* the predicate holds of the subject without exception; if I say Caesar is mortal, no exception can occur here, because the concept Caesar is a singular concept, which does not comprehend a multitude under itself...' (VL, 931/371). The formal identity of universal and singular judgments is based on the fact that neither judgment permits an exception. The universal judgment claims that all or none of a subject concept is included under the predicate concept – there is no room for exceptions. The singular judgment subsumes a singular subject concept inside or outside of the sphere of the predicate concept. This subsumption that

the singular judgment represents permits no exception because there is no multitude contained under the subject concept that could prove contrary to the judgment. The *Bloomberg Logic* follows a similar line of argumentation when it claims that both the universal and the singular judgment permit only total inclusion or total exclusion of the subject from the sphere of the predicate concept. In both cases all of the subject term is included in or excluded from the predicate concept, and therefore the judgment can have no exceptions. In this sense, then, we can speak about the two judgments in the same way – if we say ‘judgments that permit of no exception,’ we could be talking about either singular or universal judgments. It is in this way that the two judgments are identical and that one could claim that the singular judgment is a species of universal judgment.

Just as we can find the root of the identity in the passage just quoted, so too can we find the difference. In this passage the difference between the universal and the singular judgment concerns the fact that in the singular judgment, the subject concept does not contain a ‘multitude under itself.’ In the universal judgment, the predicate concept is said to include or exclude a subject concept that contains a *multitude* under itself. A universal judgment represents the extension or nonextension of a broader concept into a multitude of lesser ones. That which is contained within the subject concept constitutes a multitude that is then subsumed as a whole under the predicate concept. The singular judgment also subsumes the totality of the subject concept under the predicate concept, yet this totality is only an individual. The singular judgment therefore ‘holds without exception in just the way that the *judicium universale* does, namely because it has no sphere from which something could be excepted’ (VL, 931/371). But the difference between the two is precisely that the sphere of the predicate in the universal judgment subsumes a multitude, while in the singular judgment it subsumes an individual. It would seem, then, that an individual is not a sphere at all. What does it mean that the singular judgment has no sphere from which something could be exempted? If we take the example of ‘Caius is mortal,’ then it seems likely that Kant means that there is no other that could prove an exception to the subsumption of this subject under this predicate. What is determinate in an individual through judgment cannot be contradicted by any other individual. Yet if we follow Kant, it would seem that we must take the absence of a sphere as a totality. And we must understand this concept with no sphere as a totality in the same way that we understand the universal judgment to subsume the totality of the subject concept under the predicate – both are subsumptions without

exception. 'The *judicium universale* holds without exception because the *sphaera* comprehends everything and consequently the *singulare judicium* is equal to the universal in use. There is a distinction here nonetheless, to which one must look, although in the formal use both can go together' (VL, 931/371). When taken formally, they are similar; they can go together – in both cases the predicate concept 'comprehends everything.' The logicians are thus correct in holding to the formal similarity of the two judgments, but there is a difference. In fact there is a difference 'to which one must look.' This difference to which one must look corresponds to the difference of which we have just spoken, namely that a universal judgment has a subject concept that contains a multitude under it, while the singular judgment is without a sphere and thus contains nothing under itself.

Thus these two different passages give two different accounts of the difference between universal and singular judgments. In both accounts the similarity is accounted for in the same way: namely, neither judgment permits of exception. The logicians are correct, on this basis, for subordinating singular judgments to universal ones, and for the idea that judgment in regard to quantity can be divided into two types: universal and particular. Kant, however, in both cases differentiates his discourse from that of the logicians by holding that singular judgments deserve their own place. He thus has to justify the difference as an essential one. In the first passage he justifies the difference by referring to the specific acts of the understanding responsible for the universal and singular judgment, saying that at this level they are obviously different. In the second passage he justifies the difference in terms of the subject concept of the singular judgment having no multitude contained under it, and thus no sphere, while universal judgments subsume a subject concept that contains a multitude, and thus a sphere, under the predicate concept.

In both accounts it seems that Kant is eager to justify his inclusion of singular judgments as a specific function of quantity in judgment as he did in the *CPR*. In the first account it seems that this eagerness draws Kant outside the boundaries of general and pure logic into an account of the acts of the understanding. This account is more in keeping with both editions of the transcendental deduction. The second account stays within the bounds of general and pure logic, but gets into a problem. Kant wants to justify the inclusion of singular judgments from within the boundaries of logic alone, yet in order to do this he must give a justification of why singular judgments should not just be treated as they had been traditionally, that is, subsumed under universal ones. He does this by speaking about the subject concept of the singular judgment as

having no sphere, and that of the universal judgment as having a multitude as its sphere.

If Kant is going to succeed in making his case, he would have to show that the tradition of logic has overlooked this crucial or substantial difference. His argument would be that the logicians have overemphasized the fact that both judgments permit of no exception, and underplayed the distinction in the subject concept subsumed by the predicate. But what he is able to offer to justify the distinction is on the one hand recourse to the language and parameters of the transcendental analytic of the *Critique of Pure Reason* (the specific acts of the understanding), and on the other hand an attempt to remain within the bounds of pure logic by reference to a concept that has no sphere. The last alternative seems problematic insofar as we have to think of a subject concept with no sphere being totally subsumed or not under the predicate concept, and we have to think this subsumption as being formally the same as a subject concept that contains a multitude under itself being subsumed under a predicate.

(iv) *The Dohna-Wundlacken Logic*

There is very little discussion of the quantity of judgments in the Dohna-Wundlacken lecture notes. There is really only one discussion of it, and within it there are only two significant comments. First, Kant states that within the determination of quantity there are two types of judgment: universal and particular. 'As to quantity all judgments are either (a) universalia, are expressed by all, or (b) particularia, or rather plural judgments' (DW, 765/497). Two sentences latter, within the same paragraph Kant affirms that there are three: 'There are three sorts of judgments as to quantity, namely, universal, particular, and singular.' We can read the first passage as coherent with the logicians, and the second passage as coherent with Kant's critical or transcendental position. The logici claim that the universal and singular judgments are identical because neither permits of exception. The second passage continues by stating that 'a *judicium singulare* permits no exceptions because it has no sphaera' (DW, 765/497). This is another affirmation of the idea of the individual subject term as having no sphere – a sphere composes a multitude. These two brief comments on the nature of quantity in judgment posit two different accounts. One seems to follow the traditional logic, while the second seems to follow from the transcendental logic in which each of the four moments of judgment has three distinct species. Although Meier does discuss the singular judgment, my understanding is that he maintains it as a species of universal judgment. What is consistent

between the *Dohna-Wundlacken Logic* and the *Vienna Logic* is that the singular judgment is like the universal judgment because it permits of no exceptions. It is a legitimate and distinct quantitative determination in judgment because, unlike the universal judgment, the subject concept does not contain a multitude under itself. It is the extent of the subsumption of an individual – it is the subsumption of a subject without a sphere, without a multitude.

Thus in contradistinction to the *Vienna Logic*, the *Dohna-Wundlacken* lectures offer but one account of the difference between singular and universal judgments. But it is this very one that seems problematic because we have to talk about the extension of the sphere of the predicate concept that does not add anything to the predicate concept, that is, has no sphere. Because the subject term has no sphere, the extension, the quantitative determination proper to a singular judgment seems paradoxical. On the other hand the transcendental justification of the singular judgment goes beyond the purview of general and pure logic and introduces the concepts of self-consciousness or apperception to explain the inclusion. In both cases a purely logical justification of the singular judgment as a distinct quantitative function of judgment is lacking.

(v) *The Jäsche Logic*

Like the *Dohna-Wundlacken* lectures, Kant's treatment of the function of quantitative judgment in the *Jäsche Logic* is brief and to the point. These discussions do not seem to cost Kant much effort. His discussion of quantity and judgment takes place in paragraph 21, corresponding roughly with Meier's paragraph 300. The paragraph itself consists of two sentences, and then is followed by a set of five notes. R. Brandt, in his work *The Table of Judgments*, points out that these notes were handwritten by Kant into his copy of Meier's *Vernunftlehre*.

The first sentence of the paragraph outlines the types of quantity proper to judgment. It does not hesitate to consider singular judgments as a distinct type of judgment: 'As to quantity, judgments are either universal or particular or singular, accordingly as the subject is either wholly included in or excluded from the notion of the predicate or is only in part included in or excluded from it' (JL, 102/598). We can note here Kant's consistency with the *Vienna Logic* in affirming that the quantity of a judgment concerns the relation of inclusion or exclusion of subject concept under the predicate concept, and that this subsumption can be either total or partial. The quantity of a judgment is thus determined by the extent of the sphere of the subject that is included in or excluded from the sphere of the predicate concept through the subsumption. Yet

there are three types of judgment and only two qualifications in the second clause. The subject is either wholly included/excluded from the predicate or only partially so. Since there are no exceptions to either universal or singular judgments, we would expect that the singular judgment wholly includes or excludes the subject under the predicate term. But we will see upon further analysis that the singular judgment shares a similarity to particular judgment that complicates any attempt to subordinate the singular judgment to a type of universal judgment. The second sentence of the paragraph gives definitions of each type of quantitative judgment: 'In the universal judgment, the sphere of one concept is wholly enclosed within the sphere of another; in the particular, a part of the former is enclosed under the sphere of the other; and in the singular judgment, finally, a concept that has no sphere at all is enclosed, merely as part then, under the sphere of another' (JL, 102/598). A judgment is universal if the sphere of one concept is wholly enclosed in or excluded from that of another. A judgment is particular if only some of the sphere of a subject concept is contained under that of the predicate concept. In the singular judgment there is only one subject subsumed included/excluded under the predicate concept. The subject is not a multitude; it does not constitute a sphere. Singular judgments occur when 'a concept that has no sphere at all is enclosed, merely as part then, under the sphere of another.' Here the singular judgment is said to be enclosed only as a part under the predicate term. It makes up only a part of the predicate's sphere. This characterization is unique to the *Jäsche Logic*. So supplementing the prior accounts we have looked at, what is unique about the singular judgment is not only the subsumption of a subject without a sphere but also the fact that the subject term is only a part of the predicate.

Kant's argument is similar to a discussion of distribution, in which we are talking about subsumptive relations obtaining between subject and predicate. In a negative universal judgment we know that there is no member of the subject term that occupies the sphere of the predicate. Thus we know that just as the subject term is excluded from the sphere of the predicate, we know that all the sphere of the predicate is excluded from that of the subject. But in the affirmative universal judgment we do not know how much 'volume' the sphere of the subject takes up of the sphere of the predicate. We know something about all of the subject term, but we do not know anything about the predicate term. In affirmative particular judgments we do not know how much the sphere of the subject occupies that of the predicate. It is indeterminate. Nor do we know how much of the predicate term is occupied by the

subject term. In negative particular judgments we know that none of the subject term is contained under the predicate. All of the predicate term is excluded from them. Now in singular judgments Kant affirms that the subject can only be a part of the sphere of the predicate. This is not the same as distribution, but it is similar because Kant's characterization of the singular judgment situates it in terms both of the subject and the predicate. The subject term is wholly inscribed under the predicate term. Since the subject term of a singular judgment has no sphere and is not a multitude, it is impossible for it to encompass the entirety of the predicate. The subject term because it is not a multitude is perhaps best thought of as a point. The subject term is a point within the sphere of the predicate – it is impossible for it to occupy the whole of the predicate.

This thus adds to the justification for the inclusion of the singular judgment as its own type of quantitative function. Kant still maintains in the *Jäsche Logic* that the singular judgment and the universal judgment are identical because neither permits exceptions. 'As to logical form, singular judgments are to be assessed as like universal ones in use, for in both the predicate holds of the subject without exception. In the singular proposition, Caius is mortal, for example, there can just as little be an exception as in the universal one, All men are mortal. For there is only one Caius' (JL, 102/599). Yet, the singular judgment is shown to be fundamentally different from the universal judgment because (a) it is a subsumption without a sphere and (b) as such it can only represent a part of the sphere of the predicate.

But what does this tell us about 'extension' or quantity in logic? In the singular judgment, because there is only one subject term, there is no multitude. It is without a sphere. In particular and universal judgments there is a multitude subsumed under a predicate. Thus the subsumption in a particular or universal judgment involves the relation of spheres with determinate extension. The subsumption of a singular judgment is the subsumption of a point under the sphere of the predicate. The sphere or extension of a concept is determined by the 'extent' of concepts for which it is the ground. Therefore, the concepts subordinate to the subject are also subsumed under the predicate. But there can be no concepts subordinate to the subject term in a singular judgment. Because the subject term of a singular judgment has no sphere, there are no concepts subordinate to it. The lack of a sphere distinguishes the singular from the universal judgment. It implies the impossibility of the subject term exhaustively determining the predicate.

We have already seen in our earlier analyses that the singular judgment is a distinct species of the quantitative function of judgment

because (a) it is a concept without a sphere and (b) distinct acts of the understanding are involved. Now we see a third justification: the subject term of a singular judgment constitutes only a point in the sphere of the predicate, while in the universal judgment it is indeterminate whether the whole of the predicate term is filled up by the subject.

(vi) *Conclusion*

In the Dohna-Wundlacken lectures, the Vienna lectures, and the *Jäsche Logic* the subject term of the singular judgment is said to have no sphere. In the *Jäsche Logic* we find the additional characterization that the subject term is only a part of the sphere of the predicate. These two characterizations together constitute Kant's differentiation of the singular and the universal judgments that does not stray outside the boundaries of pure and general logic.

We saw especially in the *Vienna Logic* that there are really two strategies that Kant employs to justify the singular judgment as a distinct function of quantity in judgment. One way is from within the boundaries of general and pure logic itself. The purely logical account defines the singular judgment as the subsumption under the predicate concept of a subject concept having no sphere and occupying only a part of the predicate concept. The other way seems to go beyond the boundaries of a pure and general logic by differentiating universal and singular judgments by the acts of the understanding. We could call it the transcendental or philosophical account. By recourse to the 'acts of the understanding,' the discourse of Kant's Transcendental Analytic intrudes into his discussions of formal logic. This intrusion speaks to the extent to which Kant finds himself obliged to give a philosophical account of the assumptions of formal logic. The philosophical intrudes upon the logical when Kant finds something inadequate in the tradition of logic.

In the *Jäsche Logic* no reference is made to the acts of the understanding as an explanatory principle for justifying the inclusion of singular judgments into the primary division of judgment as to quantity. Instead, Kant contents himself with a justification that stays within the purview of pure and general logic. But just as our analysis of the *Vienna Logic* showed, there is a contradiction to the purely logical justification that Kant gives. How can a concept with no sphere be said to be subsumed under a predicate concept in the same manner as a concept with a sphere? Or, how can a concept with no sphere at all count as making up even a part of the predicate concept? It seems that if Kant stays within the discourse of logic, he can offer no utterly coherent account justifying the inclusion of the singular judgment as a distinct judgment type.

But if he does allow the discourse of the transcendental logic to intrude upon the discourse of logic, then again it seems to betray the impossibility of a purely logical account of the singular judgment that justifies its independence from the universal judgment. It is really only in the fourth chapter that this problem is resolved.

In summary, the quantitative function of judgment is the determination of the extent of the inclusion or exclusion of the subject term from the domain of the predicate. In Kant's discussion of concepts the extension of a concept is determined by the multitude of concepts it subsumes, or for which it is the ground. In judgment there is the determination of the unity of distinct concepts in regard to quantitative, qualitative, relational, and modal functions. In judgment a determination is made about the relation of the two concept spheres in each of these four ways. We have seen how much of a problem it is to understand the singular judgment from within the context of a purely logical account. Kant's transcendental account makes reference to the acts of the understanding in order to justify the inclusion of the singular judgment as specific quantitative function in judgment. This reference is itself problematic because it is a reference by the logical to a discipline outside it to give an account of its most basic assumptions. Aristotle himself in the *Categories* makes reference to *De Anima* as to the account of thinking itself. This I would say constitutes the traditional method: logic's basic assumptions are given an account of by something we can generally call first philosophy. If we can call Kant's first *Critique* a work of first philosophy, it is easy to see how the reference to the acts of the understanding to explain a division in logic is consistent with tradition. It is enough for the purpose of subsequent arguments to have given an account of Kant's attempts at a purely logical account of the function of quantity in judgment. The problematization of both transcendental and purely logical justifications for the inclusion of the singular judgment in the table of judgments only serves to alert us to certain issues that will become more explicit in the third chapter – the boundaries between logic and philosophy. The following section continues our analysis of a logical treatment of quantity by looking at the function of quantity in inferences.

(4) Inferences

As judgments establish the relation of concepts, inferences concern the relation of judgments. In the *Jäsche Logic*, Kant writes, 'Inference in general is that function of thought whereby one judgment is derived from another. An inference is thus in general the derivation of one

judgment from the other' (JL, 114/609). This derivation can be either immediate, in which case one moves directly from one judgment to the conclusion, or mediate, in which one judgment can be derived from another only through a third judgment, the minor premise. In the Jäsche lectures and in the first *Critique*, Kant calls immediate inferences, inferences of the understanding, and those that are mediate, inferences of reason (CPR, B360). Kant argues in the *Jäsche Logic* that only immediate inferences can be divided according to the fourfold division of the table of judgments. 'Inferences of the understanding run through all the classes of the logical functions of judgment and consequently are determined in their principle kinds through the moments of quantity, quality, relation, and modality' (JL, 115/610). The reason Kant gives for this division follows from his assertion that only the categories of relation constitute the horizon of possible mediate inferences. 'All rules (judgments) contain objective unity of consciousness as a condition under which one cognition belongs with another to one consciousness. Now only three conditions of this unity may be thought, namely: as subject of the inherence of marks, as ground of the dependence of one cognition on another, or finally, as combination of parts in a whole' (JL, 121/616). The only judgment type that qualifies as a rule is that of relation. A quantitative or qualitative judgment could never play such a part. The unity of consciousness that is requisite for syllogism has the three forms: substance, causality, and community. And these of course correspond to the three kinds of syllogisms: categorical, hypothetical, and disjunctive. The major premise of a categorical syllogism must be a rule that posits the inherence of a predicate in a subject. Kant's point is that there are only three thinkable kinds of rules, thus these three forms of unity represent the form of possible mediate inference. Therefore, quantity does not have a function in mediate inferences. 'Inferences of reason can be divided neither as to quantity, for every major is a rule, hence something universal...nor in regard to quality...nor in regard to mode...Thus only *relation* remains as the sole possible ground of division of inferences of reason' (JL, 122/616). This comes in the form of a note that Kant wrote into his copy of Meier's textbook. Kant suggests that because every syllogism starts out with a rule, and because all rules are universal, quantity is not a valid or useful principle of division. Since, mediate inferences do not refer thus to the functions of quantity, quality, relation, and modality, the following section is devoted to immediate inferences.

Kant's second note to this section claims that, on the basis of the distinct acts of reason, it is right to regard each form of syllogism as

ordinary. Kant makes this claim in distinction to those who recognize the categorical as the ordinary, and the hypothetical and disjunctive as 'extraordinary'. Again we see Kant make reference to the acts of thinking to justify a slight divergence from tradition. Mediate inferences or syllogisms are not articulated in accordance with the four moments of the table of categories, but according to the three moments of the category of relation. Each one of these moments is a genuine or independent type, so the disjunctive and the hypothetical syllogisms do not have to be seen as subordinate to the categorical. This deviation from tradition justifies Kant's threefold division of the category of relation. This in turn supports our repeated observation that, when Kant tries to break with the tradition of logic, it is typically in moments in which he wants to support some of the commitments of the transcendental logic, that is, to justify the division of the table of the categories.

(A) Immediate inferences

'Immediate inferences are also called inferences of the understanding' (JL, 114/609). Immediate inferences are simple formal transformations of one judgment into another. If it is true that 'No X are B,' then it is false that 'Some X are B.' In the immediate inferences of the understanding, the subject and the predicate of the judgment do not change. It is only the form of the judgment that changes. In mediate inferences, there is a third element that makes possible the inference. Immediate inferences simply alter the form of a judgment in terms of the functions of quantity, quality, relation, and modality. When we look at the primary function of quantity in immediate inferences, we see that it concerns what is traditionally called subalternation. 'In inferences of the understanding *per judicia subalternata* the two judgments are distinct as to quantity, and here the particular judgment is derived from the universal in consequence of the principle: *The inference from the universal to the particular is valid*' (JL, 116/610–1). These rules for the function of quantity in immediate inferences are discussed as governing the processes of subalternation. Subalternation is concerned with inferences that are based on a movement either from a universal to a particular judgment or from a particular to a universal, while the quality of the judgment remains the same, that is, the affirmative or negative nature of the judgment stays the same. This is familiar to all those who have taken a historical logic class as an aspect of the traditional square of opposition, in which truth is said to 'flow downwards.' Valid immediate inferences of subalternation move from universal affirmative to particular affirmative or from universal negative to particular negative. The reverse is invalid insofar as

one cannot move from the truth of a particular judgment to the truth of a universal. The only thing that changes in the process of subalternation is the quantity of the judgment.

In immediate inferences what is determined is the relation of two judgments. Each judgment is itself the determined relation of the spheres of the subject and predicate concepts. In immediate inferences it is on the basis of one judgment that one infers another. It is on the basis of one relation between subject and predicate that one can infer another. Both relations are true of the same thing – the truth of the one implies the truth of the other. It is as though in the conclusion one says the same thing as in the premise, but with a different quantitative determination. If it is true that ‘All S are P,’ then we can say that it is true that ‘Some S are P.’ These two statements point to the same entity or truth. The production of truth through subalternation is from universal to particular. On the basis of the subject concept being entirely subsumed in the predicate concept, it is necessary that both ‘all’ and ‘some’ of the subject concept is subsumed under the predicate concept. Two different functions of quantity in judgment are true of the same thing. The extension that constitutes the relation of concepts in the first judgment is given a new expression in the second through the inference. If the first judgment is true, the second is as well. If one tries to move from a particular to a universal, this is impossible, since one cannot know the all on the basis of a few. But one can move from the fact of the falsity of ‘No S are P’ to the truth of the ‘Some S are P.’ Subalternation involves an inference that alternates the quantity of the judgment while preserving the truth value. Both statements are true because they say something about the same thing. The relation of the concepts is in both cases described, but through the immediate inference, the truth of the relation is said in a new way. Instead of the relation only having one true determination, after the inference it has two. Although it does not really say anything new, the fact of the conclusion liberates the relation of concepts from their original determination. On the basis of the truth of the universal judgment, the corresponding particular judgment cannot be false.

But Kant is silent with regard to the issue of singular judgments. He does not try to justify the validity of the singular judgment with regard to the inferences of the understanding. Can we infer anything on the basis of a singular judgment? Can a singular judgment be a conclusion? If Kant were to do this, it would require him to transform and perhaps exponentially increase the complexity of the traditional square of opposition. Yet, if he is going to affirm the validity of the singular judgment

as a distinct function of quantity in judgment, then it would seem necessary to reorient the traditional doctrine of immediate inferences.

When do we use singular judgments? Kant's example of a singular judgment is 'Caius is mortal.' Of course this example introduces the problem of the proper name. It would be easy in this case to show that you could never move immediately from the judgment 'All Humans are Mortal,' to 'Caius is Mortal,' because you would thus be implying the judgment that Caius is a human, making the inference therefore a mediate one. Nor could one infer anything about all people on the basis of what is true of Caius. What is true of Caius might not even be true about any other humans. What we are saying about him may signify something specific to him. Yet it would seem that we could move from a universal claim like 'All Humans are Mortal' to the singular judgment 'This Human is Mortal.' True, one moves from a universal to a singular, but one has strayed from immediacy. It is mediated inference because it implies that 'this is a human.' There is no room here for the singular judgment in the traditional square of opposition, just as there is no room for the singular judgment in immediate inferences. Despite all the work Kant does to justify the inclusion of the singular judgment as a valid type of judgment, he is forced to remain within the tradition of universal and particular judgments when it comes to immediate inferences.

(B) Mediate inferences

I would like to move now to a brief discussion of the two kinds of mediate inferences that Kant speaks about in his lectures on logic. In the *Jäsche Logic*, there are two kinds of mediate inferences. There are mediate inferences of reason and of reflective judgment. 'All mediate inferences are either inferences of reason or inferences of the power of judgment' (JL, 114/609). We should understand reflective judgment here as coming straight out of the third *Critique*. Reflective inferences start from particulars and move toward universals. The two methods of such inferences are induction and analogy. The Dohna-Wundlacken lectures on logic dating from 1792 include reference to inferences of reflection, while the *Heschel Logic* (early 1780s) and the Bloomberg lectures (1770s) do not. The Heschel lectures do speak of induction and analogy, as does Meier's text; however, they do not make reference to analogy and induction as the two modes of the reflective power of judgment. It is the *Jäsche Logic* that is the most exhaustive.

In the mediate inferences of reason and of reflection, it is on the basis of at least two judgments that the conclusion can be drawn. Unlike

inferences of the understanding, in mediate inferences there are at least three terms. The middle term signifies the power of reason or reflection as that through which something can be inferred of one thing on the basis of its relation to something else. It is only on the basis of the mediating judgment or the minor term that the conclusion can be derived with necessity from the first. In the inferences of reflection, however, the only mediation is through the building up of examples, and thus these inferences are always contingent upon the experience from which the instances arise. This is why Kant assigns these inferences only subjective universality. It is only inferences of reason that can be said to be *a priori*, and thus independent of the conditions of experience. Inferences of reflection can provide no secure basis for their claims.

The power of judgment, by proceeding from the particular to the universal in order to draw from experience (empirically) universal – hence not *a priori* – judgments, infers either from many to all things of a kind, or from many determinations and properties in which things of one kind agree, to the remaining ones, insofar as they belong to the same principle. The former mode of inference is called inference through induction, the other inference according to analogy. (JL, 132/626)

Inferences of reflection say something about the whole, yet because of their empirical starting point their universality is not guaranteed. They have only empirical universality, meaning that the truth of the conclusion is conditioned by empirical experience. ‘The reflective power of judgment has only subjective validity, for the universal to which it proceeds from the particular is only empirical universality’ (JL, 132/626). In reflective inferences there is always the possibility of an exception to the rule, while in inferences of reason if the argument is valid then there is no room for exceptions. Inferences of reason are universal and *a priori*. They can be categorical, hypothetical, or disjunctive, but they all involve the subsumption of a condition under a universal rule: ‘An inference of reason is the cognition of the necessity of a proposition through the subsumption of its condition under a given universal rule’ (JL, 120/614). It is this subsumption that is at work in all three forms of inferences of reason.

In our analysis of judgment we saw that the predicate subsumes or does not subsume the subject concept. In inferences of reason, subsumption works between judgments. ‘The distinguishing feature among the three mentioned kinds of inferences of reason lies in the *major premise*’ (JL, 122/617). The division of the inferences of reason can only be made at the level of the major premise. Kant does break with tradition here. Traditionally, categorical syllogisms are considered the ordinary, while

the hypothetical and disjunctive syllogisms are the extraordinary. The disjunctive and hypothetical syllogisms are traditionally seen as mere permutations of the ordinary. Kant claims that the categorical syllogism is not the standard of which the hypothetical and disjunctive are deviations; rather, all three are distinct types of inference. As in Kant's struggle to justify singular judgments as their own distinct kind, here too we find him breaking with tradition in order to prove the validity of the three-part order of relation.

(5) General conclusion

(A) Results of investigations

The following is a summary of the foregoing investigations into the function of quantity in general and pure logic:

- a. Quantity in the context of concepts concerns the extent to which a concept serves as a ground for other concepts. The sphere of a concept is determined by all those concepts that are contained under it. The extension of a concept is its sphere.
- b. Quantity in the context of judgment concerns the extent of the subject concept that is included or excluded under the predicate concept. A judgment establishes a relation of the sphere of two concepts. This relation is a unity. The form of the relation of concepts in the quantitative function of judgment is subsumption. The predicate concept does or does not contain the sphere of the subject concept under itself – it does or does not subsume it. The extension of a judgment is the determination of the way in which the predicate includes/excludes the subject concept as its ground. A purely formal account of quantity in judgment assumes, as does a purely logic account of judgment in general, the unity of representations.
- c. Quantity in the context of inferences concerns only the immediate inferences of the understanding, and not the mediate inferences of reflection or of reason. It concerns logical processes of subalternation as the truth conditions for the formal derivation of one judgment from another through the simple transformation of the quantity.

(B) General remarks

(i) Extension and the countable

Typically, extension is associated with the problem of magnitudes, multitudes, and number. As such, extension is associated with the questions 'how much?' and 'how many?' and its resolution is sought

in mathematics. Extension in logic is nothing like an answer to these questions, because nothing at the level of content is determinable from within a logical treatment of cognition. Logic does not 'do the math.' If we say that there are two cups of water in that basin, then we have already gone beyond a merely formal analysis of cognition and are constructing a picture of the world by supplying information about a specific situation. Counting or 'doing the math' already presupposes something other than cognition, an object. If logic as general and pure analyzes cognition independently of the givenness of an object, and thus does not presuppose something outside of itself, then an analysis of quantity in the context of logic must exclude the sense of the countable. In concepts, the extension of a concept is determined by the multitude of concepts that are subsumed under it. A logical analysis studies the form of the subsumption and does not actually figure out which concept has a greater extension. In this way, the extension of a concept in pure and general logic is nothing countable. In judgment, quantity corresponds to the extent to which a predicate concept does or does not subsume the subject concept. The extension thus determined is the relation of the spheres of two concepts. A logical study of this relation does not reveal discrete or continuous quantities, but distinct rules of quantitative relations. A logical treatment of judgment does not presuppose an acquaintance with things, but represents formal conditions for quantitative judgments about things. Extension in immediate inferences concerns the alternation of the quantifiers of a judgment while preserving the truth value. If the universal affirmative is true, then we know that the particular affirmative is true – these two judgments are both true and concern the same extension, or relation of spheres. But this is not the determination of a quantity that can be counted – it resists countability since there is no object or intuitable manifold possible. In Kant's theory, which the next chapter will take up, mathematics, number, quantity all have a basis in intuition – without intuition, the synthetic a priori judgments of mathematics would not be possible. Even the activity of counting or of enumeration is not possible without intuition. This is yet another instance that supports the conclusion that in logic, quantity is nothing countable.

(ii) *Revealing intrusions*

We have seen, especially in the analysis of Kant's theory of judgment, that at certain moments the discourse or conceptual vocabulary of the first *Critique* intrudes upon that of general and pure logic. There are two moments in particular that were highlighted: (1) the definition of

judgment itself and (2) the justification for the inclusion of singular judgments as an independent type of quantitative function in judgment. These moments of intrusion claim a certain explanatory power. It is by reference to the acts of the understanding that Kant explains the necessity of including the singular judgment as a distinct quantitative function in judgment, and it is by reference to the transcendental unity of apperception that Kant goes beyond the definition of judgment offered by traditional logic.

These intrusions gave us insight into what general and pure logic must presuppose: consciousness and representation. In our treatment of concepts, we saw that representation is presupposed, and in our treatment of judgment, we saw that in turn consciousness and the acts of the understanding are presupposed. Those moments in which Kant goes beyond the boundaries of general and pure logic reveal the conditions of what we called in Chapter 1 the frame of the world. The conditions assumed in order for logic to offer us a frame of the world are revealed in the moments of intrusion. We also saw in this chapter that the limit of the intrusion is intuition. Kant does not make reference to intuition in order to explain logic. He confines himself in this regard to the transcendental account of thought found in the Transcendental Analytic.

It must be kept in mind that Kant only *references* consciousness and representation in logic – he does not investigate them therein. It is the transcendental logic that inquires into the grounds for the assumptions logic makes. However, what is interesting and what the next chapter will explore is that in order to give an account of how consciousness and representation are possible, Kant has to talk about intuition. The assumptions of formal logic are inquired about in transcendental logic, but are only taken up in relation to something that is outside the purview of logic.

The following chapter is an analysis of the most original basis for our experience and knowledge. It inquires into the conditions of possibility of quantity and/or extension. By going to the most basic or original condition of quantity, we hope to then make clear the way in which the treatment of quantity in general and pure logic is derivative of that. We will look at quantity both as a spatial and temporal event. We thus will build from Chapter 2's treatment of quantity in pure and general logic, toward an understanding in Chapter 3 of the meaning of quantity in the transcendental logic of the first *Critique*.

3

Transcendental Logic and the Doctrine of Quantity

(1) Introduction

This chapter is an analysis of the meaning of quantity in the transcendental logic of Immanuel Kant's *Critique of Pure Reason*. I begin this chapter with an analysis of Kant's description of the specific project of transcendental logic. This analysis emphasizes the way in which Kant uses general logic as a contrast to define the transcendental logic. I turn then to analysis of the meaning of quantity within transcendental logic. I argue that since the *Analytic of Concepts* does not offer a full transcendental exposition of quantity as a category, but the *Analytic of Principles* does, and since Kant calls the *Analytic of Principles* a doctrine because it represents a conclusion of the *Transcendental Analytic*, we ought to base our interpretation of quantity in transcendental logic on the *Analytic of Principles*. It is the first two chapters of the *Analytic of Principles* that provide us with what I will call Kant's transcendental doctrine of quantity. The sole project of this chapter is to highlight the treatment of quantity in the *Transcendental Analytic*, so as to set up the comparison of transcendental logic and general logic in the next chapter.

(2) In Kant's words: transcendental logic

This section discusses transcendental logic and its relation to general logic. We find Kant making statements in regard to this relation in the introduction to the whole of the transcendental logic, and in the introduction to the second book of the *Transcendental Analytic*. Because both of these introductions frame their descriptions of transcendental logic by its identity and difference with respect to formal logic, they

are eminently important for my inquiry. Some of these sections were already discussed in Chapters 1 and 2, but only to work up an interpretation of the general and pure logic that Kant takes as his clue to the deduction of the categories. Now we return to them to gather what we can about the nature of transcendental logic itself.

(A) Origin

The first section of note comes from the introduction to the transcendental logic as a whole. Kant begins by stating that general logic is not concerned with the origin of our representations because it has abstracted from the content of cognition. He claims transcendental logic does not make this abstraction, but rather takes up the possibility of there being for cognition a manifold presented by intuition. This is precisely what is directly presupposed by the determinate sciences, and indirectly presupposed by logic. The analysis of the origin of cognition will be a logic and not a determinate science because it is not looking at any particular content. It does not seek to inform us about any particular part of the objective world, but rather investigates the condition for the possibility of knowing as such. It will be *transcendental* insofar as it analyzes the form of the cognition of an object in general and articulates the a priori elements constitutive of this form. In Kant's words, a transcendental logic

would therefore concern the origin of our cognitions of objects insofar as that cannot be ascribed to the objects; while general logic, on the contrary, has nothing to do with this origin of cognition, but rather considers representations, whether they are originally given a priori in ourselves or only empirically, merely in respect of the laws according to which the understanding brings them into relation to one another when it thinks, and therefore it deals only with the form of the understanding, which can be given to the representations wherever they may have originated. (CPR, A55/B80)

This is the first and one of the best examples of Kant's defining the project of transcendental logic in its difference from formal logic. Here general logic is not concerned with the origin of the representations in question. It concerns 'only' the formal rules of thought's self-agreement. Since it is only a treatment of the rules for the correct use of the understanding in general, the question of the origin of the object of cognition and of thought's a priori contribution to this cognition is something outside of general logic's sphere.

Transcendental logic is a science that inquires into the origin of representation 'insofar as it cannot be ascribed to objects' and that 'does not abstract from all content.' These two negative determinations show correlatively that transcendental logic investigates the a priori contribution of thought to the cognition of an object. The universality of the content of transcendental logic, especially the analytic part, cuts across disciplinary boundaries because it contains the form of objective thought itself. Geometry and arithmetic also consist in a priori cognitions, but they do not inquire into the conditions of possibility for these a priori concepts. Thus not all a priori cognition is transcendental, but only that which cognizes 'that and how certain representations (intuitions or concepts) are applied entirely a priori, or are possible' (CPR, A56/B80). Not only empirical but also a priori sciences receive their grounding from the transcendental logic. The specific question of transcendental logic concerns 'that and how' certain a priori representations are valid for all experience and cognition. Kant writes of the transcendental logic, 'Such a science, which would determine the origin, the domain, and the objective validity of such cognitions, would have to be called transcendental logic, since it deals merely with the laws of the understanding and reason, but only insofar as they are related to objects a priori and not, as in the case of general logic, to empirical as well as pure cognitions of reason without distinction' (CPR, A57/B51). 'Such a science' concerns the conditions for the possibility of the application of our concepts to objects a priori and in general. General logic and transcendental logic are thus similar in that they treat cognition without reference to the particularities of objects. Yet transcendental logic is different because it carries this formal analysis of cognition out in relation to the possibility of the cognition of an object in general. The difference here, as in the last passage, is that logic is indifferent to a difference that is at the heart of transcendental logic. In the case of the current passage, what logic is indifferent to is the difference between pure or empirical cognition. The treatment of cognition supplied by general logic is such that the question as to the division between pure and empirical is of no consequence, and neither is the division between a priori and a posteriori. For Kant, it is the fact that transcendental logic is not indifferent to these distinctions that individuates its task from that of general logic.

(B) Intuition and synthesis

The introduction to the whole of the transcendental logic provides us with another example of the use Kant makes of general logic in justifying the project of transcendental logic. It includes a famous passage

that concerns the very project of the analytic part of the transcendental logic.

In a transcendental logic we isolate the understanding (as we did above with sensibility in the transcendental aesthetic) and elevate from our cognition merely the part of our thought that has its origin solely in the understanding. The use of this pure cognition, however, depends on this as its condition: that objects are given to us in intuition to which it can be applied. For without intuition all of our cognitions would lack objects, and therefore remain completely empty. The part of transcendental logic, therefore, that expounds the elements of the pure cognition of the understanding and the principles without which no object can be thought at all, is the transcendental analytic, and at the same time, a logic of truth. For no cognition can contradict it without at the same time losing all content, i.e., all relation to any object, hence all truth. (CPR, A62/B87)

This transcendental inquiry takes up the question of the origin of our pure a priori concepts, under the condition that they are related a priori to objects given in intuition. We 'isolate' and 'elevate' the a priori formal conditions of sensibility in the transcendental aesthetic, and now we isolate and elevate the formal conditions of thought, or spontaneity, in the transcendental logic.

Kant claims that the transcendental analytic will contain the elements and principles that constitute a logic of truth. This logic of truth is not supplied by general logic. General logic provides us only with a negative touchstone of truth, showing merely whether cognition is formally valid – it is a necessary but not sufficient criterion of truth. The transcendental analytic as it is portrayed here is a sufficient criterion of truth, since it outlines the conditions of possibility not of thinking as such, but of thinking of *something* as such. Kant writes that 'no cognition can contradict it without at the same time losing all content...' and this is consistent with his claim that the transcendental analytic contains an analysis of the formal conditions of cognition that is a priori related to objects of intuition, since it is the condition for there being a content for thought. 'The use of this pure cognition, however, depends on this as its condition: that objects are given to us in intuition to which it can be applied.' The condition of the analysis of cognition undertaken by transcendental logic is that there is a manifold to which the form of cognition is possibly applied, while the analytic part of a formal logic is indifferent to any conditions of the givenness of its representations.

Again the same warning must be repeated: even though the transcendental analytic is distinct from general logic because its analysis of the form of cognition is oriented toward the possibility of the thought of something, it is still distinct from the a priori cognitions of natural science, mathematics, and even metaphysics, since it is asking of the 'origin, domain, and objective validity' of the cognition of something.

Transcendental logic thus looks at the origin of our concepts in relation to the form of thought of an object given through pure or empirical intuition. The following passage comes from the first chapter of the first book of the *Transcendental Analytic* and prepares the way for a discussion of synthesis. Again, it shows the way in which general logic is used to define transcendental logic. It occurs in the passage that Kant calls in the B edition the metaphysical deduction of the categories:

As has already been frequently said, general logic abstracts from all content of cognition, and expects that representations will be given to it from elsewhere, wherever this may be.... Transcendental logic, on the contrary, has a manifold of sensibility that lies before it a priori which the transcendental aesthetic has offered to it, in order to provide the pure concepts of the understanding with a matter, without which they would be without any content, thus completely empty. (CPR, A76/B102)

As we have already seen, transcendental logic does not abstract from all content. 'Such a science' looks at the possibility of the relating of the pure concepts of the understanding to the 'manifold of sensibility that lies before it a priori which the transcendental aesthetic has offered to it...' Following the transcendental aesthetic, the *Transcendental Analytic's* first book, concerning the elements of our a priori cognition, isolates the a priori contribution of the understanding to the cognition of objects given in space and time through intuition. It is a formal analysis of the thinking that is a priori related to the forms of sensibility.

Kant now further develops his characterization of this science as centered on the problem of synthesis. 'Only the spontaneity of our thought requires that this manifold first be gone through, taken up, and combined in a certain way in order for cognition to be made possible. I call this action synthesis' (CPR, A77/B102). The analytic part of transcendental logic thus has to deal with the problem of synthesis, because it is asking after the way in which concepts are applied a priori to a manifold presented in intuition. The transcendental logic builds from the deductions of the transcendental aesthetic, and thus takes as proven, first, that

it is necessary and universal that all appearances be intuited in space and time and, second, that all possible experience is of appearances. If the transcendental logic now demonstrates the a priori form of all cognition of objects in general, then it, with the transcendental aesthetic, has determined the a priori conditions for the possibility of truth.

By synthesis, I take Kant specifically in this context to mean the combination of a manifold presented by intuition with a concept supplied by the understanding. But as one reads on, the next passage goes on to complicate this interpretation: 'Different representations are brought under one concept analytically (a business treated by general logic). Transcendental logic, however, teaches how to bring under concepts not the representations but the pure synthesis of representations' (CPR, A78/B104). This is a curious statement. Unlike general logic, the synthesis that will supply the condition for the logic of truth brings under concepts (synthesizes) the syntheses of representations. Kant suggests that we are taught in transcendental logic how to 'bring under' concepts the pure syntheses of representations. What are the pure syntheses of representation? I take them to be the pure concepts of the understanding, the subject matter of the transcendental deduction. The Cognition of determinate objects proper to the maths and natural science involve pure and empirical representations, while the content of transcendental logic is the analysis of the syntheses that the combination of representations possible. This interpretation is merited by the following passage in which the pure concept of the understanding is responsible for the synthesis of syntheses.

The first thing that must be given to us a priori for the cognition of all objects is the manifold of pure intuition, the synthesis of this manifold by means of the imagination is the second thing, but it still does not yield cognition. The concepts that give this pure synthesis unity, and that consist solely in the representation of this necessary synthetic unity, are the third thing necessary for cognition of an object that comes before us, and they depend on the understanding. (CPR, A78 –9/B104)

Here the project of the transcendental deduction of the categories, especially in the A edition, is outlined as a synthesis of syntheses that as a whole lend cognition both its possibility and its consistency. The structure of this passage is circular, but not viciously so. We start with the synthesis of intuition. This is a distinct synthesis necessary for cognition as a whole, and seems to correspond to the givenness offered by the

transcendental aesthetic. It corresponds to intuition as a synthesis of apprehension conditioned by the forms of space and time. This synthesis of apprehension is 'followed' by the synthesis of imagination. In other places Kant calls this the power of retention. It is a synthesis that is the condition for the recognition of an object in the present as 'having been.' This power synthesizes what is with what has been, and can be said to be the condition, following apprehension, for the representation of continuity (CPR, A101/B152). Kant's examples seem to highlight this synthesis as the power to re-present something as the same in a particular way, such as, Kant says, cinnabar as red. The third synthesis is the synthesis of recognition, or the synthesis of the concept. This is the third or final synthesis in Kant's series, and is identified with the unity of apperception. Here the concept is the rule of synthesis that unifies both the synthesis of apprehension and the synthesis of imagination. It is the ground for the unity of both, but it is also a third synthesis. In this sense the concept is the synthesis of the syntheses of apprehension and retention. The pure concept of the understanding is the ground of the unity of syntheses.

The condition or specific domain of transcendental logic's analysis of concepts, and what distinguishes it from general logic is the unity of synthesis carried out on the basis of the a priori form of spontaneity. The treatment of the a priori form of the understanding insofar as it is a priori related to the offering provided by the transcendental aesthetic focuses on the problem of synthesis in general, and the condition of the synthetic unity of apperception as the most encompassing synthesis. Thus, as we noted in the discussions of judgment in Chapter 2, transcendental logic, in contrast to general logic, concerns how judgment happens – how it is possible for us to unite a priori concepts and the a priori forms of intuition into both the event of judgment and the continuity found in experience.

(C) Application

The difference between transcendental logic and general logic is a consistent theme throughout the *Critique of Pure Reason*. It is almost as if we can understand the argumentative development of the transcendental logic by the different tones it takes toward general logic. In the *Analytic of Principles*, Kant writes, 'General logic can supply no rules for judgment, the situation is entirely different in transcendental logic' (CPR, A135/B174). The new description of general logic that is given in this part of the transcendental analytic is that it cannot provide instances of the application of its rules. It can provide formal rules for the relation of

concepts in judgments, but it cannot show how its rules can be applied. It would have to go beyond its boundaries into other disciplines to give examples, and even then, its rules would have to be abstracted from the example. 'Transcendental philosophy has the peculiarity that besides the rules which are given in the pure concepts of understanding, it can also specify a priori the instance to which the rule is to be applied' (CPR, A135/B174). Not only has transcendental logic been distinguished from general logic because it deals with the a priori form of the cognition of objects, but now we see that it also shows the instance of that form's application. Kant can argue in the *Analytic of Principles* that the bases of mathematics and physics are to be found in the conditions of the original application of the categories to objects as appearances. Not only can Kant in the *Analytic of Concepts* show that the categories are necessary and universal in experience but he can then go on and exhibit instances of the rules of synthesis that the categories represent. 'The analytic of principles will accordingly be solely a canon for the power of judgment that teaches it to apply to appearances the concepts of the understanding...' (CPR, A132/B171). Transcendental logic can answer the question as to 'how' the pure concepts of the understanding apply a priori to objects offered by intuition. This is something general logic cannot do with its formal rules of thought.

A further characterization of the nature of transcendental logic via its difference from general and pure logic is given in the opening paragraphs of the *Analytic of Principles*. Here Kant argues that general logic is divided according to the 'higher faculties of cognition. These are understanding, the power of judgment, and reason' (CPR, A130/B169). The point that is important for clarifying transcendental logic's application of the pure concepts of the understanding in judgment is in regard to reason. 'Since merely formal logic...abstracts from all content of cognition, and concerns itself merely with the form of thinking in general, it can also include in its analytical part the canon for reason... into which there can be a priori insight...without taking into consideration the particular nature of the cognition about which it is employed' (CPR, A131/B170). General and pure logic can provide the formal rules of inference, the rules governing the subsumption of concepts in judgment, because as abstract it is indifferent to the origin and particular content of the concepts, judgments, and inferences. But because transcendental logic concerns the form of thinking related a priori to an object, it...cannot imitate general logic in this division (CPR, A131/B170). While general and pure logic can include discussions of the mediate inferences of reason in its analytical part, transcendental logic

cannot. Although there is a dialectical part to general and pure logic, it is not specifically concerned with the inferences of reason. But in transcendental logic this is precisely the case: 'For it turns out that the transcendental use of reason is not objectively valid at all, thus does not belong to the logic of truth, i.e., the analytic...' (CPR, A131/B170). Because transcendental logic is not indifferent to the application of the a priori contributions of thought to knowledge, it must distinguish the content of its analytic part from that of general logic. 'Only reason in its attempts to make out something about objects a priori and to extend cognition beyond the bounds of possible experience is wholly and entirely dialectical...' (CPR, A131/B170). Logic contains in its analytic part a canon of reason concerning the formal rules of inference. Transcendental logic identifies reason as a logic of illusion, separates it from the analytic's 'logic of truth.' It is only capable of such a separation because of its concern with the conditions of there being for thought an object a priori. Because the transcendental logic follows the transcendental aesthetic, we can understand this separation of reason from the logic of truth to follow from the demonstration that the valid use of the categories is in relation to objects given in time and space, as pure or empirical intuitions. 'Transcendental logic, since it is limited to a determinate content...cannot imitate general logic in this division.' This condition of the application of the categories to objects of intuition justifies a difference between what is contained within the analytical part of general logic compared with transcendental logic.

Earlier, we saw that the transcendental logic is concerned with 'that and how' a priori concepts apply to objects given in experience, but now we are in a position to see how the structure of the Transcendental Analytic is organized around the 'that and how' questions. The first book of the Transcendental Analytic deduces the necessity and universality of the categories; it shows *that* the pure concepts must apply to all appearances. The second book, the Analytic of Principles, shows how these categories are actually applied to the manifold offered by intuition. This application will be the focus of the following section, which specifically seeks to uncover the way in which the doctrine of quantity articulates such an application.

(D) Conclusion

We have seen by our examples the way in which Kant employs general logic to introduce transcendental logic. We have also seen that the difference between the two logics is developed throughout the *Critique*, and receives more and more specific articulations as we progress through

the text. At first Kant makes the distinction of origin, claiming that general logic is indifferent to the origin of our representations, but that transcendental logic is a question about this origin. Then we saw that transcendental logic is oriented like logic to an a priori treatment of cognition, but that unlike logic, it is exclusively a treatment of cognition as a priori related to objects given by intuition. It is the analytic of the form of thought thinking an object. Yet it is unlike the material sciences such as mathematics and physics since its concepts pertain to an object as such. The content of the analytic of truth is universal because it is not concerned with one set of objects over and against another – it is not conditioned by a specific kind of object. Transcendental logic articulates the rules governing the synthesis of a priori representations, a synthesis that is beyond the scope of general logic. We then saw that because general logic abstracts from all content of cognition, it could never specify the instances of the proper application of its rules. Because of its universality, every instance of thought ought to be an instance of its rules. As abstract and formal, as the negative touchstone of truth, the analytic part of general logic still never addresses, as we will show in Chapter 4 in more depth, that through which it has its purpose, that is, the objective cognition of what is. In the transcendental logic, however, we can show on the basis of argument that the application of the categories makes possible a systematic doctrine of fundamental conditions of all objects of cognition. General logic can say nothing of objects – it can add nothing to our picture of the world. This is not to say that transcendental logic augments our picture of the world. Transcendental logic does not tell us anything about the world, but it does provide us with a framework within which our picture of the objective world can be constructed. Anything that goes beyond this framework passes beyond the boundaries of possible experience and verification. This is a boundary, a limit that pure and general logic could never draw.

(3) The doctrine of quantity

We have given a general survey of the difference between transcendental logic and general and pure logic. Now we must turn to an analysis of the meaning of quantity within the transcendental logic of the first *Critique*. But before we can do that, we must first decide what will serve as the basis for our interpretation of the transcendental account of quantity.

The Transcendental Analytic is divided into two books. The first book, the Analytic of Concepts, is composed of both the metaphysical deduction and the transcendental deduction of the categories. It is in the

metaphysical deduction that the category of quantity is first presented in the *Critique of Pure Reason*. It is presented as the first moment of the table of categories. There is little direct treatment of quantity in the metaphysical deduction. The transcendental deduction itself contains no extended or even brief discussion of the category of quantity. It is only in the *Analytic of Principles* that Kant gives a direct account of quantity as a category. The *Analytic of Principles* is composed of three chapters, which treat respectively the schematism, the system of all principles of pure understanding, and the distinction between phenomena and noumena. It is only in the first two chapters that a direct treatment of quantity is found.

The three chapters of the *Analytic of Principles* are all moments in what Kant calls 'The Transcendental Doctrine of the Power of Judgment.' What is it about these three chapters that merit their being considered a doctrine? By 'doctrine' Kant means a systematic knowledge that is a result of prior successful deductions. Doctrine in the context of the first *Critique* is not a dogma because it follows from the results of critique. The doctrine of quantity, then, can be found in the first two chapters of the *Analytic of Principles*. It follows from the arguments in the transcendental aesthetic and the *Analytic of Concepts*. It is to this doctrine that we must look if we are to represent the meaning of quantity in transcendental logic.

(A) The schema in general

The chapter on the schematism begins with Kant's asking about how it is possible for the pure concepts of the understanding to be applied a priori to appearances (CPR, A138/B177). What is the third thing that mediates the relation of the a priori forms of intuition and the a priori forms of the understanding? Kant's answer to this question concerns both time and the transcendental power of imagination. Kant claims that time and the imagination are both capable of making this application possible because each is homogeneous with both of the a priori contributions of the human mind to experience (CPR, A137/B176). Time and the imagination are each both intellectual and sensible. They are thus homogeneous with both elements of human cognition, and so can function to mediate their relation. 'Hence an application of the category to appearances becomes possible by means of the transcendental time-determination which, as the schema of the concept of the understanding, mediates the subsumption of the latter under the former' (CPR A139/B178). The schema is an activity that 'brings together' the manifold presented by intuition and the pure concept of the understanding

in a relation of subsumption. It makes this unity possible, and thus represents the limit conditions of intelligibility. This condition is the transcendental time determination and the power of imagination that makes it possible.

When Kant talks about the schema as a production of the transcendental power of imagination, he distinguishes it from the particular images of the empirical or determinate imagination: 'Now this representation of a general procedure of the imagination for providing a concept with its image is what I call the schema for this concept.... The image is a product of the empirical faculty of productive imagination, the schema of sensible concepts is a product and as it were a monogram of pure a priori imagination' (CPR, A140 –1/B179–181). The schema itself can never be brought to an image, but is rather the 'monogram' of which all images share a formal resemblance. We can never imagine the schema itself, since as *transcendental* it would always already be the form in accordance with which an image would be constructed.

But this difference between the schema and the image is really a side issue that Kant brings up for purposes of clarification. The real center of Kant's characterization of the schema is as: 'a transcendental product of the imagination, which concerns the determination of the inner sense in general, in accordance with conditions of its form (time) in regard to all representations insofar as these are to be connected together a priori in one concept in accord with the unity of apperception' (CPR, A142/B181). It is here said that time is the form of all representations insofar as representations are 'connected a priori in one concept in accord with the unity of apperception.' This is the condition of representation to which the schemata correspond. This is the condition of the object of both inner and outer sense being subsumed by the category. When Kant speaks about 'all' representations, he must have recourse to time as the form of inner sense, since time as such includes within itself all outer sense. Thus the form of inner sense must be the form of all representation in general, and this is why the schemas are transcendental *time* determinations.

In this passage we see Kant claiming that the schemata bring together or synthesize two heterogeneous elements in relations of subsumption. The doctrine of the schematism asserts that the only way for the categories of the understanding to have significance is for them to fall under the conditions of unity that the schemata represent. The mediating syntheses constitute the general conditions of any and all representations that can be evaluated as to their truth or falsity, because without these conditions there would be no object of thought: 'The schemata of the concepts of the pure understanding are the true and sole conditions

for providing them with a relation to objects, thus with significance...’ (CPR, A146/B185). Thus the *significance* of the categories is limited to the conditions outlined in the schematism chapter, because it is through the schemata that the unity of the sensible and the intelligible is possible. ‘Without schemata, therefore, the categories are only functions of the understanding for concepts but do not represent any object. This significance comes to them from sensibility, which realizes the understanding at the same time as it restricts it’ (CPR, A147/B187). The transcendental time determinations, as the production of the transcendental imagination, mediate the relation of the sensible and the intelligible. They are the paradigms of the unity of the heterogeneous elements. It is as such that we must understand the schema of quantity.

(B) The schema of number

Kant presents the schemata in a table as he earlier did when presenting the logical forms of judgment, and the pure forms of the understanding or categories. Quantity in the table of schemas is represented by the *schema of number*. Thus our first analysis of a transcendental account of quantity must start there. It brings us face to face with the problem indicated in the Introduction and Chapter 2, that is, the problem of the relation between extension and the countable.

Kant discusses the schema of number on three distinct occasions within the schematism chapter. The first is the most extensive. The second and third occasions are brief and merely list the schema of number alongside the other moments of the table of schemas. These two additional occasions, however, provide us with additional information about the schema of number, especially in regard to the way in which it fits into Kant’s transcendental theory of time.

(i) Conditions of apprehension: the first occasion

The first and most important discussion of the schema of number occurs at A142–3/B182, and reads as follows:

The pure image of all magnitudes for outer sense is space; for all objects of the senses in general, it is time. The pure schema of magnitude (*quantitas*), however, as a concept of the understanding, is number, which is a representation that summarizes the successive addition of one (homogenous) unit to another. Thus number is nothing other than the unity of the synthesis of a homogenous intuition in general, because, I generate time itself in the apprehension of the intuition.

The schema of number pertains to the successive addition of units, and as such pertains to both space and time. Time and space both have distinct units of measurement, and as such the schema of number applies to both. The schema of number then applies to both spatial representation and temporal representation. Yet, Kant claims that time is the pure image of all objects of the senses 'in general,' both inner and outer. The successive addition of parts that number summarizes is fundamentally a temporal one.

But just as it is not the schema itself that is brought to an image, it is not the transcendental time determination that is counted by the numbering of parts of time. The transcendental time determination is itself what makes the numbering of time or space possible. How do transcendental time determinations make possible the determination of temporal durations as well as spatial magnitude? I think in answer to this question we have to understand two different ways in which Kant gives privilege to time. First, time is privileged as the most encompassing form of sense in general. We can call this time's general privilege. The condition of time is always present in both inner and outer sense, while the condition of space is not present in inner sense. This kind of privilege simply says that all that can appear in space is also in time. If we try to understand this from experience, we can say that one cannot count the number of birds at the feeder without taking time to do so. It also can be said that it takes time to measure the distance between two trees. One cannot apprehend empirical objects of outer sense without the condition of time. Kant's claim appears to be common sense when the objects counted are given in empirical intuition. But if we look at pure geometry, it is a little more difficult to understand time as the form of all intuition. How is the pure intuition of space conditioned by time? Despite the difficulty of finding in Kant's work a consistent answer to this question, we can say that the capacity to recognize a demonstration of a geometrical proof requires some capacity to recognize distinct judgments as logically following from one another. In other words the truth or significance of pure geometry is grounded on the condition of recognizing the existence of a series, or succession of statements of the spatial properties of objects as connected together. This is true of all argumentation in general. There could be no geometrical demonstrations if the temporal synthesis of homogeneous parts were not already possible.

But there is another and very different privilege given to time which we can call the transcendental privilege of time. The transcendental privilege of time is one that makes possible both inner and outer sense. The transcendental conditions for the possibility of the successive addition

of homogeneous parts are fundamentally conditions that make possible the apprehension of an object. The transcendental time determinations are the conditions of representation in general, and are thus conditions for the apprehension of any object. The schema of number is *transcendental* because it makes the successive addition of homogeneous parts of time possible.

The general privilege of time is that all spatial determination must also have a temporal value. The transcendental privilege of time is one that makes possible the successive synthesis of homogeneous parts essential to both temporal and spatial apprehension. The general privilege of time is made possible by the transcendental privilege. And it is precisely in this way that the transcendental time determinations are to be distinguished from the form of inner sense, since they make it possible.

Kant's first discussion of the schema of number is brief, yet it is at the same time the most extensive of the three occasions in this chapter. Its brevity is an expression of the fact that Kant assumes the reader to have already accepted so many of the previous arguments of the *Critique*. He does very little to connect the account of the schema of number with any of his earlier arguments. For instance, in this discussion there is no mention of the distinct moments of the category of quantity, and how the schema would apply to each. There is also no mention of the transcendental unity of apperception, or the way it is involved in these most basic conditions of experience and knowledge. I think we would have to assume that it functions to contribute to experience the unity of the concept, and so its function is itself what is united with the intuition by the schema. What "number" numbers in this case is an amount of time or space. And here we see the way that the category of quantity is involved in the schema of number. But Kant himself does not spell this out for his reader: we simply must assume that the schema of number has already been shown to be the mediation of the category and the intuition.

The schema of number must be thought of as the unity of the a priori forms of intuition and the category of quantity. It is transcendental because it would make possible the determination of any object of inner or outer sense as a unity, plurality, or totality. Further, we can understand the schema of number as the basic condition of any one of the moments of the category of quantity. This is to say that anything that is to be judged a unity, plurality, or totality would necessarily be an instance of the schema of number, that is, the result of the synthesis of homogeneous units. Kant stresses that the schemas represent the limit conditions for the significance of the categories – thus it is only under the condition of the schema of number that the categories have a valid

use. Something can be validly determined as a unity, plurality, or totality only if it is in accordance with schema of number, that is, the result of the representation of a summative synthesis of homogeneous parts.

The first doctrine, then, of quantity in the transcendental logic is as a schema. The schema of number is a transcendental time determination that makes possible the inner and outer sense. This doctrine contends that the first form of the mediating synthesis of the intellect and sensibility is the synthesis of homogenous parts. The following analysis of the remaining discussions of the schema of number highlight the way in which the primordial condition of the unity of the categories and intuition, of intellect and sensibility, is the possibility of the recognition of a succession in time.

(ii) *Series and succession: the remaining occasions*

In the schematism chapter there are two other discussions of the schema of number. Both discussions are instances in which Kant situates the schema of number within a list of the other moments of the table of schemata. The first of these reads as follows: 'Now one sees from all this that the schema of each category contains and makes representable: in the case of magnitude, the generation (synthesis) of time itself, in the successive apprehension of an object; in the case of the schema of quality...' (CPR, A145/B184). Here the schema of quantity represents the 'generation (synthesis) of time itself, in the successive apprehension of an object.' The schema *makes representable* the successive synthesis of apprehension. Here again we see that the schema is something that makes representations possible. Just as in Kant's first discussion, the moment of quantity is here linked to the condition for the possibility of time itself. What is unique here, though, is that this condition is tied to the successive apprehension of an object. Time itself and 'successive apprehension of an object' are both made representable by the schema of number. The schema of number is said to generate our experience of time itself in the successive apprehension of an object. So the relation of the concept of magnitude to sensibility is the subsumption that makes possible the recognition that an object is an aggregate (homogeneous whole).

Kant's third discussion of the schema of number is like the second in that it occurs in the context of his listing all the moments of the table of schemata. It reads as follows: 'The schemata are therefore nothing but a priori time-determinations in accordance with rules, and these concern according to the order of the categories, the time-series, the content of time, the order of time, and finally the sum total of time in regard to all possible objects' (CPR, A145/B184). In this passage, Kant

stresses that the schemata in general are forms of 'time determination in accordance with rules.' The schema of quantity specifically concerns the rules for the time-series. The rules are supplied by the understanding, as its pure concepts, and are what the manifold presented by intuition are brought under. Because it is through the unity of apperception that the category is supplied, the unity of apperception has to be involved in the schematism, even though Kant does not explicitly address this issue. In the same way, intuition as the synthesis of apprehension has to be involved in the schematism. We can think of these two unities, the unity of apperception and the unity of apprehension, as subject to the condition of time. They are involved as mediated elements, in which what is apprehended is subsumed under the category of quantity through the schema of number. On the basis of the specific mediating synthesis of quantity, we can say that everything that is an object of inner or outer sense must be numerable.

(iii) Conclusion

The schematism chapter presents us with different forms whereby the categories of the understanding and the forms of intuition are brought together. The schemata mediate the unity of apperception and the unity of apprehension. As such they represent the limit conditions of the valid use of the categories. The schema of number concerns the successive addition of homogeneous parts. As the first doctrinal discussion of quantity, the schema of number makes representable an object as having temporal or spatial measure. This means that any object of inner and outer sense must be numerable since all objects must be aggregates. It also means that everything that can be said to be objective must in the first place be countable.

(C) The principles

The second chapter of the *Analytic of Principles* is entitled *System of All Principles of Pure Understanding*. Kant claims that the task of the chapter about the pure principles of the understanding is to lay out the a priori principles of judgment in conformity with the restricting conditions outlined in the schematism chapter (CPR, A148/B187). They are to be read as the conditions of the possible validity of all determinate a priori or a posteriori judgments. All of mathematics and natural science must follow from these principles. They are principles because they cannot be grounded on or derived from any more fundamental judgments (CPR, A148/B188). We must think of the principles as the basic framework within which all cognition of objects that can be said

to be objectively true or false must materialize. But what is interesting about Kant's discussion of these principles is that, although he puts great emphasis on the way in which these principles serve to mark conditions in conformity to which all science must be, he also has to argue that experience itself is subject to these same conditions.

Kant claims that the principles cannot be proven objectively, since any attempt to do so would presuppose them. He says that he can provide a subjective proof of the validity of the principles based on 'the subjective sources of the possibility of a cognition of an object in general' (CPR, A149/B188). This subjective proof, however, does not start from any given subjective experience of this or that phenomenon. Kant shows that it is the form of experience that offers the subjective basis for the proof of the necessity and universality of the principles for all cognition. Part of Kant's argument in the principles chapter is that the principles that regulate the form of knowledge are the same as those that regulate our experience. Both experience and objective knowledge must conform to the restricting conditions outlined in the schematism chapter. The subjective proof of the principles presents the underlying conditions of possibility for the truth of objective sciences. It accomplishes this presentation by showing the identification of the principles of experience with the principles of objective cognition. We will see further that in the B edition Kant stresses that these principles not only regulate knowledge and experience but also regulate all perception as well. The principles thus represent what must be true of an object if it is to be either an object of perception, an object of experience, or an object of scientific knowledge. The principles themselves are not given in perception, experience, or objective knowledge, but rather are the grounds for the perception, experience, or knowledge of an object in general.

(i) Mathematical principles

Kant divides the principles into mathematical and dynamic principles. The principles of quantity and quality are mathematical, while those of relation and modality are dynamic. In both the A and the B editions, Kant says that the mathematical principles 'are all unconditionally necessary,' since they 'carry with them immediate evidence.' Kant's example of the two triangles that are created in the diagonal line through the square is helpful because it reminds us that, for Kant, the truths of mathematics can be constructed in intuition. Kant contrasts the unconditional certainty and immediate evidence of the mathematical principles (quantity and quality) with the mediate or indirect 'discursive' certainty of the dynamic principles (relation and modality). For Kant,

the dynamic principles say something about the existence of the object, while the mathematical principles say something about the givenness of objects in intuition. This discussion takes place at A160 –1/B199, and concludes with the promise that the different kinds of certainty will be easier to understand at the end of the chapter. However, Kant never comes back to this issue. It would be entirely up to us to think through this difference if it were not for a note that Kant adds in his copy of the A edition of the *Critique*. This note claims that the distinction between the immediate and mediate certainties characteristic of mathematical and dynamic principles respectively is a distinction at the level of synthesis. Kant claims that the mathematical principles are combinations of ‘composition’ (*Zusammensetzung*), or the Latin *compositio*, while the dynamic principles are combinations of ‘connection’ (*Verknüpfung*), or the Latin *nexus*. By ‘combination as composition,’ Kant understands a synthesis that combines many or a series of homogeneous parts into a whole, in which the parts do not necessarily belong together (the two triangles). By ‘combination of connection,’ we are to understand a synthesis of distinct, or unhomogeneous (*ungleichartig*) elements that do necessarily belong together (e.g., cause and effect). The differentiation of principles qua synthesis is based on the distinction of homogeneous/unhomogeneous elements, and the unnecessary/necessary relations obtaining between them. The synthesis of what does not necessarily belong together ‘can be further divided into that of aggregation and of collation.’ This corresponds to quantity (the axioms of intuition) and quality (the anticipations of perception). So in anticipation of our analysis of the principle of quantity, we can say that it concerns the successive synthesis of homogeneous parts that do not necessarily belong together, which are capable of absolute certainty since they can be exhibited in intuition.

(D) The axioms of intuition

The principle of the axioms of intuition is presented as all of the principles are, with the listing of the principle in a separate column, centered, as a distinct part of the text. The uniqueness of the graphic presentation of the principles highlights their doctrinal significance. This is different from anything presented in the *Critique* thus far. Even the schematism chapter goes through the schematized categories on a case-by-case basis merely as a series of paragraphs.

Kant’s elucidation of the axioms of intuition in the A edition is composed of four paragraphs. The first gives an introduction of what Kant means by the axiom of intuition. It defines extensive magnitude

and shows the way in which the successive synthesis of homogeneous parts is both temporal and spatial. The second and third paragraphs give accounts of the way in which geometry and arithmetic respectively are grounded in the axioms of intuition. The fourth gives a general surmise of the meaning of the axioms for understanding the limits of objective knowledge. In sum, in the A edition, Kant elucidates the principle, shows its significance for mathematics, and then situates it within his overall epistemological system.

In the B edition, Kant supplements the A edition with a new introductory paragraph. When one reads the B edition, in contrast with the A edition, there are two paragraphs that together give an account of what Kant means by the axiom of intuition. But what is also different about the B edition is that Kant reformulates the principle itself. Does this represent a change in doctrine? The A edition formulates the principle as such: 'All appearances are, as regards their intuition, extensive magnitudes.' It makes a claim about all appearances insofar as they are intuited. Insofar as we intuit appearances, these appearances are all extensive magnitudes. This is a doctrine – it is affirming something true of all objects in general. The B edition version is as follows: 'All intuitions are extensive magnitudes.' 'Appearances' are not explicitly mentioned in the B edition formulation. In both versions everything proper to intuition is an extensive magnitude, but in the B edition the claim is made about all intuitions and not all appearances insofar as they are intuited. How can we explain the fact that appearances are not mentioned in the B edition? It is important to note that the first paragraph in the B edition elucidation of this principle begins by claiming that all appearances 'contain' 'an intuition in space and time.' 'All appearances contain, as regards their form, an intuition in space and time, which grounds them a priori.' The removal of the concept of appearances in the formulation of the principle seems best interpreted as a simplification and not a change in doctrine, since the B edition elucidation commences with the assertion that all appearances are conditioned by intuition.

Before we begin the exegesis of what Kant actually says about the axioms of intuition and the difference between the two editions, I would like to say a few words about the place of the axioms of intuition within the overall system of principles. The first thing of which we must make note is the order of the principles. If we look at the first *Critique* sequentially, from the beginning to the end, the principles seem to follow the structure of the table of logical judgments and the table of categories. Kant even says at the beginning of this chapter that the table of categories provides him with a sure guide to the systematic

presentation of the principles of the pure understanding (CPR, A148/B187). But the metaphysical deduction claims that the table of logical functions in judgment provides a sure guide or clue to the construction of his table of categories. Regardless, in all of the tables Kant puts quantity in the first place, followed by quality, relation, and modality. Here, by first place we mean that it is primary in the order of exposition. Can we say that because quantity is first in exposition, it is also the most basic? Or, on the contrary, is that which is presented last, curiously, the most basic? We could claim that, based on other commentators, we can indeed read quantity as the most basic moment of the table of principles. Kant's intention must be to place quantity as somehow most basic, even based simply on the title of the chapter: Systematic representation of all synthetic principles of pure understanding. It is a systematic exposition, and given this systematic emphasis, there must be something of quantity in the system that causes it to be first in exposition. One problem with this interpretation is that we would then assume that the presentation of the table of judgments and the table of categories would be under the same systematic principle. Yet, Kant's discussions of the table of judgments and the table of categories do not lead one to believe that one should read quantity as the most primary determination, such that other determinations (such as quality, relation, and modality) presuppose it. Yet, in the *Analytic of Principles* it does seem that the primacy of quantity is not merely arbitrary, but rather implies a starting point in the systematic construction of Kant's doctrine. This is easy to see in the schematism chapter, in which we saw that quantity as a schema relates to the genesis of time itself. It is also easy to see when we look at quantity as a principle that the successive addition of homogeneous parts is the most primitive or rudimentary condition of all experience and knowledge.

We can argue that the axioms of intuition represent the most basic principles of all thought, not only because of the order of exposition but also on the basis of what Kant says about the meaning of quantity in the doctrine. In both the schema of number and the axioms of intuition, what is emphasized is the successive synthesis of homogeneous parts. In both cases the successive synthesis of homogeneous units is the ground of possibility for objects of outer and inner sense, whether pure or empirical. Without this synthesis, no object could be an object of cognition or experience. In the schematism chapter, the schema of the successive addition of homogeneous parts represents for Kant the genesis of time itself and the birth of the time-series. The claim that all intuitions must be extensive magnitudes represents for Kant, on this interpretation,

the primary condition not only for all objective knowledge but also for all perception and experience. The problem with this interpretation is that it does not explain why the primacy of quantity is justified in the analytic of principles and not in the analytic of concepts.

What the primacy of quantity implies is that everything that can be validly claimed about an object presupposes the successive synthesis of homogeneous parts into a whole, given in intuition as either spatial or temporal. Everything about which something that is either true or false can be said is an extensive magnitude and thus can be counted.

(i) *B edition addition*

The first sentence of the B edition's exposition of the axioms of intuition says that 'All appearances with regard to their form contain an intuition in space and time which grounds them a priori.' We have already noted the way in which this first sentence returns to what had dropped out of the A edition formulation of the axioms of intuition. Kant's claim here, as in the transcendental aesthetic, is that whatever appears must necessarily be in space and time as an object of intuition. Is this just a reiteration of the results of the transcendental aesthetic? In the B edition, instead of starting with definitions, which he does in the A edition, Kant begins by making clear the assumptions that go into that principle by restating arguments from prior sections. The principle of the axioms of intuition must be seen as a result, and as such it must follow from what precedes it. It can take what has already been shown to be necessary and universal for granted. In this case the formulation of the axioms of intuition must follow from the transcendental aesthetic. On this reading of the B edition, the new introductory paragraph functions to draw out the arguments that are implicit in the doctrine the principle represents.

The second sentence also seems to build from earlier arguments. It says both that every appearance is determinate, and that this determination requires a synthesis to make it possible. Space and time 'cannot be apprehended, therefore, i.e., taken up into empirical consciousness, except through the synthesis of the manifold through which the representations of a determinate space or time are generated, i.e., through the composition of that which is homogeneous and the consciousness of the synthetic unity of this manifold (of the homogeneous)' (CPR, A161/B202). It is only through the synthesis of a determinate manifold that space and time are apprehended. This sentence goes beyond the results of the transcendental aesthetic by discussing consciousness, as a condition of synthesis. As we saw earlier in our discussion of the difference between general logic and transcendental logic, the problem of synthesis

is a question for transcendental logic. The problem of the synthesis of representations is first discussed in the transcendental deduction. Thus, in addition to intuition, the consciousness of the synthetic unity of the composition is also a condition of determinate appearances. Kant in this paragraph brings up results not only from the transcendental aesthetic but also the *Analytic of Concepts*.

In the next sentence, the third, Kant makes a preliminary conclusion: 'Now the consciousness of the homogeneous manifold in general, insofar as through it the representation of an object first becomes possible, is the concept of a magnitude (quantity).' Here we are face to face with the first extended treatment of quantity in the *CPR*. Interpreters of Kant's first *Critique*, such as Graham Bird, Otfried Höffe, Paul Guyer, and Herbert James Paton, all emphasize the fact that the schematism chapter and the principles chapter are the only places in the text in which Kant gives a case-by-case analysis of the meaning of each of the categories. Consciousness of a homogeneous manifold is identified with the concept of magnitude. This is coherent with the schema of number, in which the unity of the category magnitude and of intuition is the successive addition of homogeneous parts. The concept of magnitude that is a priori related to sensibility is the consciousness of the successive addition of homogeneous parts. Kant also claims that the concept of magnitude first makes the representation of an object possible. This confirms our interpretation of the primacy of quantity. Consciousness of the homogeneous manifold as an extensive magnitude is that through which the representation of an object as such first becomes possible.

The doctrine that all objects of intuition are extensive magnitudes follows from the necessary unity of the category and the manifold presented by intuition in the schematism chapter. But as a principle of all objects as such, the axioms of intuition delimit the conditions of appearances. The principle represented by the axioms of intuition is that every appearance, and thus every object of thought, must be an extensive magnitude. If the categories are to have significance, and if our thought is to be objective, every object of thought must be an extensive magnitude, that is, be an aggregate of homogenous parts. The last sentence of the B edition supplement completes Kant's argument:

Thus even perception of an object, as appearance, is possible only through the same synthetic unity of the manifold of given sensible intuition through which the unity of the composition of the homogeneous manifold is thought in the concept of a magnitude, i.e., the appearances are all magnitudes, and indeed extensive magnitudes,

since as intuitions in space or time they must be represented through the same synthesis as that through which space and time in general are determined. (CPR, B203)

In this last sentence of the B edition, what is emphasized, which is not in the A edition, is the identity of the synthesis necessary for perception and the synthesis necessary for cognition. What is emphasized is that, that through which we think the concept of magnitude/quantity is the same as that through which an object of perception is possible. There is an identity of synthesis requisite for the possibility of a determinate magnitude of space or time as something perceived and as something thought. We have already begun to see, then, how especially in the B edition what is emphasized is that the principles are not merely the conditions of scientific thought. Kant's claim is richer than that. It is that the principles as doctrine represent the conditions of the totality of the human standpoint. They are the conditions in accordance with which perception and experience take place. Yet as principles also for knowledge, we see that the critical project of the first *Critique* is to show that the categories have a justifiable use only insofar as they are bound up with sensibility, and thus with perception and experience.

Inserted into Kant's copy of the A edition is the following note, which echoes the emphasis on the identity of the principle of perception and cognition: 'Since we can all arrange perceptions only through apprehension in time, but this is a synthesis of the homogeneous, which the concept of magnitude corresponds to in the unity of consciousness, we cannot cognize the objects of outer and inner sense otherwise than as magnitudes in experience.' What I take Kant to be stressing here is the identity of that which makes the perception of objects possible and that which makes the cognition of those objects possible. Kant can only really provide a foundation for science if he can show that valid science is in conformity with the same principles that govern experience, and as he says, *even* perception. The object as given successively through its appearance in distinct parts of space or time is made possible by the same consciousness of the synthesis of homogeneous parts that makes possible the objective determinations of extensive magnitude. I argued earlier in the schematism section that a pure geometry is also subject to this condition of the synthesis of the homogeneous, just as all argumentation is itself. The axioms of intuition thus represent universal fundamental conditions.

The doctrine here is then that all appearances are extensive magnitudes, and that what can be perceived is subject to the same conditions as that which can be known and experienced. Thus, as a result of the

schema, it can be said that all appearances have mathematical value. The possibility of appearances being given to us rests upon the same synthesis through which the quantitative evaluation of them is possible. This is the schema of number. Experience and knowledge, and even perception are all determined by the same synthesis, and thus the view of the axioms of intuition as following from the schema of number is a principle for the total epistemological situation: perception, experience, and science.

(ii) *The A edition*

The first paragraph of the A edition is the second paragraph in the B edition, and it starts by defining extensive magnitude. It is the only paragraph in the A edition that directly elucidates the axioms of intuition. The remaining paragraphs simply situate the significance of the axioms in terms of geometry, arithmetic, and Kant's overall epistemological position. But this first paragraph is itself relatively simple to the extent that it defines extensive magnitude, shows that this is true of all spatial and temporal units, and then concludes by distinguishing extensive and intensive magnitude. Unlike the B edition introductory paragraph, there is no direct recapitulation of the arguments upon which it is based. It simply begins by defining its terms: 'I call an extensive magnitude that in which the representation of the parts make possible the representation of the whole (and therefore necessarily precedes the latter)' (CPR, A162). What is distinct for Kant about extensive magnitude is that the representation of the parts makes possible the representation of the whole. This is not the case with intensive magnitude, or quality. Extensive magnitude is that representation in which the parts of a homogenous manifold, either spatial or temporal, precede the representation of the whole. They are successively added together. A string of moments presents us with an extent of time, and the addition of parts of space provides us with an extent of space.

The second sentence presents us with an example that shows how any line that I represent to myself presupposes the principle of the successive addition of homogeneous parts. Its ambition is thus to say that all spatial relations are ordered by the axioms of intuition. In any line one 'successively generates all its parts from one point' in intuition. It is only by starting at one place and then successively adding parts that the whole is constructed, or given in intuition. Thus the determination of any dimension requires this successive synthesis of homogeneous parts. The whole of a determinate appearance is always preceded by the succession of parts, and thus Kant argues that all spatial representations, either pure or empirical, presuppose the possibility of the successive addition

of temporal homogenous parts. Time as succession or serial is again the most fundamental horizon of the epistemological situation. What this would mean is that every spatial whole grasped in perception must necessarily have a past to the extent that it is the result of a successive or serial synthesis. But this is just as true for any geometrical demonstration, since we must successively generate the determinate geometrical proof through the construction of the spatial relations in intuition.

In the third and fourth sentences, Kant claims that the same principle of the primacy of the parts to the whole is true of time: 'It is exactly the same with even the smallest time.' What he claims to have just shown about space, he now claims to be true of time. 'I think therein only the successive progress from one moment to another, where through all parts of time and their addition a determinate magnitude of time is finally generated.' Any determinate duration of time must necessarily be the result of the successive synthesis. The recognition of durations of time is one of the prime effects of the sensibility on the category of magnitude. In the schematism chapter, the schema of number was associated with the genesis of the time series itself, and now here one aspect of the axiom of intuition represents the primary condition for the possibility of durations of time. In this discussion it is important to note that Kant is not emphasizing the more primordial status of time over space. His discussion in the second, third, and fourth sentences seems to treat space and time as equally expressions of the axioms of intuition, since all objects in space and time must be extensive magnitudes. Yet there is also the sense that all appearances must be extensive magnitudes of time, but not all appearances must be extensive magnitudes of space. This is not a transcendental argument about time, such as the schematism chapter. But it still posits time as the more general form. It thus corresponds to the first privilege of time that we discussed earlier. Also of note regarding the fourth sentence is the claim that the extensive magnitude of time is a progressive synthesis. Kant uses the word *fortgang*, instead of simply *sukzessive* to characterize the synthesis of parts of time. This is different from the preceding discussions of space, in which *sukzessive* is used. *Fortgang* can indicate a progress, but it can also indicate a simple continuity. First, we should not identify this elucidation of time as a divergence from the elucidation of space given in the preceding sentence, such that time would have the element of progressiveness in its synthesis, while space would not. The same purposiveness that might be said to be occurring in the succession of moments in time would also be true of the synthesis of spaces, that is, the progress involved in the drawing of a line. Both would be the synthesis of aggregates into

a determinate extensive magnitude. Secondly, we must remember the mathematical principles concern the relation of parts that do not necessarily belong together. So by 'progress' we should understand continuity and not development. This is only to say that this principle does not introduce any causal relations between the order of successive parts. If we suggest that the synthesis of temporal magnitude is progressive, it would seem that we would inject the idea of telos into Kant's argument where there need not be one. This interpretation is supported when Kant shows in the fifth sentence that every appearance in general is necessarily conditioned by the 'successive' synthesis. 'Since the mere intuition in all appearances is either space or time, every appearance as intuition is an extensive magnitude, as it can only be cognized through successive synthesis (from part to part) in apprehension' (CPR, A 163/B203). Kant merely states that every appearance in time must be an extensive magnitude, and as such be an aggregate of homogeneous parts that are successively brought together into a whole. This is true of parts of time as it is of parts of space.

A claim about all appearances marks the conclusion of the A edition introduction. 'All appearances are accordingly already intuited as aggregates (multitudes of antecedently given parts) which is not the case with every kind of magnitude, but rather only those that are represented and apprehended by us as extensive.' All appearances must be 'already intuited as aggregates.' The axiom of intuition as the mathematical principle of quantity makes the claim that all appearances, of inner and outer sense, are aggregates. As such, the valid use of the categories in knowledge claims must concern something having extensive magnitude.

The first paragraph of the B edition emphasizes that the principle that all appearances are extensive magnitudes is true for knowledge, experience, and *even* perception. The doctrine of the first paragraph in the A edition is that every appearance must be the unity of a 'multitude of antecedently given parts.' In both editions, everything that can be spoken of objectively. Everything within the limits of the justified use of the categories is conditioned by the possible synthesis of antecedently given homogeneous parts.

(iii) *The remains: geometry, arithmetic, and the thing in itself*

In both editions, what follows the first A edition paragraph does not tell us directly any more about the axioms of intuition. What remains for Kant to do in these paragraphs is to elucidate the significance of the axioms of intuition for the field of mathematics, and for his overall epistemological project.

The third paragraph in the B edition, and the second in the A edition, discusses the way in which the axioms of geometry follow from and are thus verifications of the axioms of intuition. Kant calls geometry the 'mathematics of extension,' and claims that it is grounded on 'the conditions of sensible intuition a priori,' namely, the successive syntheses of homogeneous parts of space. Primarily Kant's project is to show the way in which geometry is made possible by the axioms, but he also shows how all appearances are coherent with the truths of geometry. Geometry applies a priori to all objects of outer sense. But this claim is itself only a result of the fact that Kant has already argued that the synthesis that orders the appearance also orders cognition. But this is distinct from the claim that he makes in the following paragraph about arithmetic.

Arithmetic is shown to be just as conditioned by the axioms of intuition as geometry is. It is not possible without the successive synthesis of homogeneous parts. However, the 'self-evident propositions of numerical relation' are 'singular' and cannot provide us with axioms in the same way geometry can. Kant claims that the answers to the questions of arithmetic can never provide us with the universality necessary for axioms. Arithmetical operations are objective and contain synthetic a priori cognitions, but they do not signify something true of every numerical relation, or of every object of inner sense. Kant's emphasis is on the singularity of arithmetical formulas, over and against the universality of geometrical formulas. Thus the truths of arithmetic do not pertain to the objects of either inner or outer sense in the way that the truths of geometry pertain to outer sense. There is thus not a science of time in the same way as there is a science of space. Again, arithmetic is not the science of the inner sense as geometry is the science of the outer sense. This is actually very important for our interpretation of the relation of general logic to transcendental logic, and we shall return to this point in the conclusion.

This fifth paragraph is intended by Kant to be a summary and conclusion. It does not supply us with any new arguments. It starts with the following line: 'This transcendental principle of the mathematics of appearances yields a great expansion of our a priori cognition.' What remains for Kant to do in this paragraph is to emphasize how the 'axiom' of intuition (all objects of intuition are extensive magnitudes) is that 'alone which makes mathematics applicable to objects of experience.' He also stresses that it is appearances and not things in themselves to which both forms of mathematics apply. The condition of appearances, or of sensible apprehension, is a limit condition of the possibility for the significance of the categories. Kant's epistemological situation is thus such that what we can know in mathematics is only what is a

unity of parts of time or space. 'The synthesis of spaces and times, as the essential form of all intuition, is that which at the same time makes possible the apprehension of the appearance, thus every outer experience, consequently also all cognition of its objects, and what mathematics in its pure use proves about the former is also necessarily valid for the latter' (CPR, A165/B206). This passage makes the claim about all mathematics, and not simply geometry. So, although arithmetic cannot provide us with axioms as geometry can, it still proves something in its pure use that is valid also for empirical objects. But why does Kant emphasize outer experience here and not inner experience? Is it that he is still only capable of holding to geometry in order to make this claim regarding the conditions of all possible appearance? We already saw that the singularity of arithmetical operations excludes arithmetic from the universality that geometry enjoys. There is something about the inner sense that precludes the possibility of an axiomatic in the same way there is with regard to outer sense. It is this 'something' that stops Kant in crucial moments from claiming arithmetic in the same way as he claims geometry. He cannot use arithmetic to prove, as he can geometry, that all appearances are governed by the same principles as our cognition of them. It is only from geometry and the outer sense that this claim from mathematics to appearances can be lent support. There is something enigmatic about the form of the inner sense that keeps it distinct from that of the outer sense. It is this distinction that makes arithmetic not the science of time in the same way that geometry is the science of space.

(iv) *Conclusion*

The fundamental doctrine of the axioms of intuition is that all objects of intuition are extensive magnitudes. This principle is a doctrine that follows from the unity with which the schema of number presented us. The objects of inner and outer sense are equally conditioned by this principle. There is no object of inner or outer sense that is not an extensive magnitude. Every object of outer sense is an aggregate of spatial parts, and every object of inner sense is an aggregate of temporal parts. Every whole of perception or thought is a multiplicity of antecedently given parts that are unified by a synthesis.

The general doctrine seems to be that what makes possible the objects of experience or perception also makes possible our cognition of objects. This identity of the successive addition of homogeneous parts is the first condition in accordance with which what we can say, can be evaluated objectively as to its truth or falsity. And it is this doctrine primarily that

we will be comparing in the next chapter with the treatment of quantity in general and pure logic.

(4) General conclusions: logic, arithmetic, and inner sense

Kant's transcendental aesthetic and his chapter on the schematism show that time and space are never given independently of the determination of an object. There is always something in time or in space through which we know, experience, or even perceive time and space. Yet for an object to be possible, we need not only intuition but also concepts. And just as space and time cannot be perceived without objects in them, so too we cannot use our concepts without something we cognize through them – all of our thought is the thought of something. So, for Kant, we need the contribution of both the *a priori* forms of intuition and the *a priori* forms of the understanding. These two *a priori* contributions are shown to be necessary and universal in the transcendental aesthetic and in the *Analytic of Concepts*, the first book of the *Transcendental Analytic*. Once Kant has deduced these two forms as necessary and universal, he can then in the chapter on the schematism show how they are originally united. As we saw, the transcendental time determinations mediate the subsumption of the contribution of the intuition under the categories of the understanding. Kant argues that this subsumption is the condition for the valid employment of the categories – all other use cannot be verified by experience, and thus goes beyond the possibility of objective science. Once Kant has presented us with the forms of mediation, he can then say what judgments about objects are *a priori* possible. Kant's definition and elucidations of the axioms of intuition claim that each object of inner or outer sense must be an extensive magnitude. This marks what I think is the essence of his doctrine of quantity.

The following chapter interprets the relationship between transcendental logic and general logic on the basis of Kant's denial of intellectual intuition. It is by reference to Kant's denial of intellectual intuition that we can understand the absence of a science of time or the inner sense. We have already seen that there is no science of the inner sense or time as there is of space. What Kant calls empirical self-consciousness is an appearance. As an appearance it is given as a manifold presented by intuition and is subsumed under a category. As such, it is as much subject to the conditions outlined in the principles as any other object. The object of inner sense is therefore just as much conditioned by the unity of intuition and concepts as the objects of outer sense. Now, there

is a science of the form of space or outer sense, and that would be geometry. Someone who does arithmetic, however, is not studying the form of inner sense. It is true that the conditions of inner sense are identical at the level of synthesis with the conditions of arithmetic, since they are both made possible by the axioms of intuition. But it is not true that inner sense is studied in arithmetic, as outer sense is studied in geometry. Is there a science of the inner sense? Psychology cannot be considered a science of the inner sense, or a science of time. Kant says in his lectures on logic that psychology concerns how humans actually think. It does not examine the principles or the form of the possibility of the self, which it studies – it is not transcendental philosophy. If the science of the inner sense is not arithmetic, and it is also not psychology, could it be logic? Kant claims that logic is the form of thinking itself, or the form of thinking's agreement with itself. But logic is not a science of time or the inner sense; it is not what geometry is to space. Because the logician abstracts from all content and from any relation of cognition to an object, the treatment of cognition in logic is not conditioned by time or space. For just this reason, it cannot be considered a science of the inner sense. Time as the form of inner sense is not itself presented to consciousness as an object in time. The pure form of time cannot be constructed in intuition in the same way that the pure form of space can be constructed in intuition in geometry. Neither logic, psychology, nor arithmetic studies the universal form of time, as geometry does that of space.

In the following chapter, I show how the fact that there is no pure science of time follows from Kant's assertion that for human cognition there is no intellectual intuition. Kant's denial that human cognition has intellectual intuition is significant for understanding the relationship between transcendental and general logic, because it sheds light on why there is no science of inner sense. This in turn illuminates the epistemological situation in which Kant's distinction between transcendental and general logic makes sense. But as we will see in the following chapter, because there is no science of inner sense, and because there is no intellectual intuition, there is no way to understand how logic is possible from within the first *Critique*.

4

Logic and Intellectual Intuition

This chapter shows that a direct route between transcendental logic and general and pure logic is impossible. An indirect route is possible, however, but it requires us to take a detour through Immanuel Kant's sometimes confusing general estimation of the epistemological situation of the human standpoint. I argue in conclusion that the two logics are isomorphic. By this I mean that they are heterogeneous from one perspective, but homogeneous from another.

We concluded Chapter 3 by suggesting that the doctrine of quantity in the *Critique* requires that all determinate cognition that is in accordance with the valid use of the categories must have, involved in its object, extensive magnitude. Within the limit conditions of the valid use of the categories, anything that can be an object of perception and knowledge must be first an aggregate – the result of the synthesis of homogeneous parts. Does this result help us understand the way in which a transcendental account of quantity can provide a foundation for logic's treatment of quantity? How does the logical treatment of the relation of spheres in judgment relate to that of the transcendental account of the possibility of all objects of perception and determinate science? In other words, how can we move from a transcendental account of quantity back to make sense of quantity as taken up in formal logic? The following sections construct an interpretation of the way in which general and pure logic can be said to be related to, but not grounded by, transcendental logic.

(1) A direct or circuitous route?

I would like to present what I think are three clues that help us to map out the routes available to us for constructing an interpretation of the

way in which quantity in general and pure logic is related to quantity in the transcendental logic.

The first clue I would like to present supports the idea of a discernable route between the two logics. This first clue is the metaphysical deduction itself. Our analyses of the metaphysical deduction in Chapters 1, 2, and 3 made it clear that Kant takes traditional formal logic as a clue for genesis of the table of categories, an element in the transcendental logic. The fact that this deduction is even undertaken by Kant gives credence to the idea that there must be some path between the two logics. The second clue is taken from our analyses in Chapter 2. There we noticed the way in which the discourse of the transcendental logic *encroaches* upon the discourse of the general and pure logic. These encroachments take place where Kant is trying to break with the tradition of logic. We saw this especially with regard to Kant's justifications for the inclusion of the singular judgment as a distinct moment of quantity in judgment, and with regard to his discussions of the nature of the copula. What is important about these encroachments of the discourse of transcendental logic into the general and pure logic is that they give us a reason to suppose that in some way the discourse of transcendental logic constitutes a philosophical treatment of general and pure logic. This clue, taken together with the clue that the metaphysical deduction represents, suggests that there is reason to believe a route between the two logics exists. Yet, it remains to be determined what this route is.

The third clue I would like to present suggests decisively that there is no *direct* route available between the two logics. If we are to interpret Kant's project in the first critique accurately, the radical disciplinary heterogeneity between the two logics must be maintained. This clue concerns the distinct difference between transcendental logic and general and pure logic, especially in regard to the way in which the transcendental logic functions as a ground for other disciplines. This distinctive difference was already emphasized in the third chapter, but I think now we can try to situate the architectonic meaning of this difference in a more satisfactory manner. Kant claims in the B edition preface that the main task of the transcendental logic is to provide the foundations and limit conditions for synthetic a priori judgments. Mathematics, natural science, and metaphysics are the disciplines concerned with the content of synthetic and a priori judgments. Pure and general logic, as we saw in Chapters 1 and 3, is not concerned with synthetic a priori judgments in their difference to analytic judgments. If we look at the results of Kant's critical inquiry we can say, without arousing too much controversy, that synthetic a priori judgments whose objects are beyond the possibility

of objective verification are not valid. Despite their claim to add to our understanding of the world, in going beyond the conditions outlined in the analytic part of the first critique, these additions are necessarily unintelligible. Metaphysics, at least in its precritical sense, does not deserve the title of 'science' because its synthetic a priori judgments cannot be tested or verified under the conditions of a possible experience. On the other hand, the synthetic and a priori determinate judgments of mathematics and natural science can be verified, and so they objectively amplify our understanding of the world. They each conform to the conditions outlined specifically in the second chapter of the *Analytic of Principles* – that is these disciplines concern the extensional, intensional, relational, and modal determinations of objects. General and pure logic is not identified by Kant as a discipline consisting of or requiring synthetic a priori judgments. This is to say that it is not composed of them, yet it can treat them within its discourse on the types of judgment, or the methods and elements of genuine science. What is essential to us here is that general and pure logic does not consist of synthetic a priori cognitions, because it does not have an object in the same way as metaphysics, mathematics, and natural science do. In other words, because logic is not the determinate cognition of anything, because it is merely a negative touchstone for truth, its ground of possibility is not directly addressed in the work of the first *Critique*. Taken as a clue, this negative result states that a clear and direct passage from the conditions of possibility of synthetic a priori judgments to the conditions for the possibility of general and pure logic is not immediately evident as it would be for natural science, mathematics, and even metaphysics. The ground for the possibility of formal logic is not secured or established by the results of the first critique.

The first two clues suggest that a route is possible, yet do not determine what kind of a route it is. This last clue makes it clear that the route from the transcendental conditions of synthetic a priori judgments to the conditions outlined by logic is not a direct one. These two clues taken together suggest that there must be a circuitous or indirect route available that the following will explore.

(2) Two theses on the value of logic

A circuitous route is by definition not immediately apparent. It is mediate, demanding a process or a series of steps. The following puts forward two theses on the value or *purpose* of logic. These two theses map out a circuitous route from transcendental logic to general and pure

logic by way of Kant's more general claims regarding the epistemology of the human standpoint. The two theses are as follows: (1) general and pure logic (the negative condition of truth) has as its reason for being in the determinate cognition of mathematics and the natural sciences (the positive condition of truth), and (2) Kant's conception of the disciplinary purpose of logic reflects his commitment to the denial of intellectual intuition as something proper to the human standpoint. Although these two theses explicitly thematize the relation of logic to Kant's more general epistemological project, they also imply and shed significant light on nature of the relation of transcendental logic to formal logic, which will become obvious as we move along.

The first thesis suggests that if it were not for the cognition of the determinate sciences, logic would have no value, or purpose. Logic represents the formal conditions to which all cognition must conform if it is to be said to be objectively true or false. Logic itself has no relation to material truth because it makes no claims about the world that would be in need of actual or possible intuition for verification. In our analysis of truth in both Kant's *Critique* and lectures on logic, we noted that Kant stresses that one must look first at the formal validity of a statement prior to evaluating it as to its material truth. Correlatively, we saw that logical validity is a necessary but not a sufficient condition for truth. Logic is only a set of conditions that must be met on the way to the determinate cognition that can be said to be true or false. To cognize something that is objectively true or false, we would require not only the adherence of thought to its own rules (logic) but also the relation of our thought to a determinate content. Kant's critique of metaphysics for the most part hinges upon this distinction, since it had assumed that formal conditions were sufficient in themselves. Kant's point is that a sufficient determination of truth requires not only formal or logical coherence but also material correspondence. Of course there could be no sufficient or material determination of the truth of a cognition if it did not already have logical validity. The conditions outlined by general and pure logic are only part of the natural movement of inquiry toward the sufficient determination of the truth or falsity of a particular cognition. My point here is that logic as a formal criterion of truth would be unnecessary if it were not for the determinate cognition that actually says something about the world, and does so objectively. If it were not for the possibility of a sufficient determination of truth, the negative conditions of truth (logic) would have no purpose. Furthermore, since the *Critique* shows that synthetic a priori cognition in metaphysics is invalid, the end, that is, the sufficient determination of truth, of general and pure logic can

at best be that of mathematics and physics, because it is only physics and mathematics that have the certainty or objectivity that logic must always frame. So insofar as logic has as its end or purpose the determinate knowledge of the world, and since in Kant's view only mathematics and the natural sciences constitute valid objective knowledge, the end or purpose of the discipline of logic is to provide the negative touchstone for math and physics. This is part of what Kant means when he calls general and pure logic the outer courtyard of the sciences. As an outer courtyard, it is something to pass through in order to penetrate into the determinate knowledge of the various sciences – the purpose of the outer courtyard is to frame the inner sanctum. If the world were without science, and all that we had was common sense, logic as it is in Kant's philosophy would have no purpose. To be precise, it is only with the will toward the objective truth claims of the maths and sciences that the meaning or purpose of logic arises.

The second thesis is this: for Kant, general and pure logic would be without purpose or value if human cognition had intellectual intuition. To see this, we must understand the function of logic as a 'negative touchstone' in the context of the epistemology of the human standpoint. The epistemological situation of the human standpoint is such that it is capable of both formal and material error. All thought as to its form must agree with the rules set out by logic. Once it is seen to be in conformity with the rules of logic, the content of the cognition can be determined as to its objective truth or falsity. The conditions of possibility for the determination of the material truth or falsity of cognition are provided by the analytic parts of the transcendental logic presented in the first *Critique*. Therein are laid out the conditions beyond which a sufficient determination of the truth is impossible. Human cognition is thus conditioned by the double criteria of formal and material truth, which are represented by general and pure logic and transcendental logic respectively. Kant contrasts the conditions of truth proper to the human standpoint with that of the divine understanding. To help to understand what he means by a divine mind, Kant asks us to imagine a mind that intuits, and as such does not need a relation to sensibility to give its concepts content. 'For if I wanted to think of an understanding that itself intuited (as, say, a divine understanding which would not represent given objects, but through whose representation the objects would themselves at the same time be given, or produced), then the categories would have no significance to such a cognition' (CPR, B144). 'But since in us a certain form of sensible intuition a priori is fundamental..., as the condition under which all objects of our (human) intuition must

necessarily stand...' (CPR, B150). 'In us,' there is no intellectual intuition; 'our (human) intuition' is sensible and is the only condition for the application of the categories. If human cognition had intellectual intuition, our thought would not need content from something outside itself. The divine understanding is sovereign to the extent that it does not need anything outside of itself for the production of truth. Thus there would be no necessity for a schema that would synthesize these two heterogeneous orders of a priori form. The divine mind knows, or has content for its ideas, without reference to any form of sensibility. Its ideas would be given in a way that is not conditioned by time and space as a priori forms of intuition. In the 1796 essay *On a Recently Prominent Tone of Superiority in Philosophy*, Kant writes that the 'discursive understanding must employ much labor in resolving and again compounding its concepts according to principles, and toil up many steps to make advances in knowledge, whereas an intellectual intuition would grasp and present the object immediately, and all at once.' This divine mind would not have to wait for experience to present objects for it to know, nor would it have to wait for experience to confirm the truth or falsity of its thoughts, or for it to situate the particular cognition within the totality of cognition per se. No toil or laborious struggle to advance knowledge would be necessary – the system of knowledge and the totality of objects and all their determinations would be given 'immediately, and all at once.' The human standpoint, in contrast, is such that we require experience and time to recognize the rule-governedness of a phenomenon, to verify our knowledge claims about objects, and to determine their relation to all preexisting knowledge. The lack of intellectual intuition accounts for why the human understanding has to labor so much and often for so long to attain the systematic coherence characteristic of science. Our concepts would be empty if it were not for the content received from intuition, and intuition would be blind were it not for the a priori determinations of thought. The valid use of the categories is a priori related to the synthesis of intuition, and this limited use is the epistemological condition of the human standpoint. For the divine mind or with any mind that would have intellectual intuition, the totality of the thing, the transcendental ideal as he calls it, is always already achieved (CPR, A572/B600). The divine understanding would grasp each concept in its place within the whole immediately, and would not need time to construct a vision of the whole – the unity of thought and being is both the given and the thought. For the divine understanding, there is no experience that could in any way add to the content of its knowledge, but nor could there be any experience that

could falsify its knowledge. It would immediately think the object in its thoroughgoing determination.

The human understanding, cognition 'for us,' is in time, and needs experience to supplement and confirm its knowledge. If we simply intuited ideas and concepts independently of appearances given in space or time, then logic as a corrective or negative touchstone would be useless, since there could be no source for error, either formally or materially. These two distinct criteria of truth would not even be applicable to the intuitive intellect – they could not, not be met. For Kant, the formal and material conditions of truth, taken together, mark out the specificity of the human standpoint. The very necessity of one discipline articulating the negative, formal conditions of truth and another based on an account of the positive, material conditions of truth speaks to the very toils and perils peculiar to human thought. The possibility of thought's being formally invalid or of its being materially false or unverifiable are both reflections of the peculiar epistemological difficulties of the human standpoint revealed in contrast to the divine intellect for 'whom' to think and to intuit are one.

These two theses give us a sense for the meaning or purpose of the discipline of logic in the context of the human standpoint. They show us that logic would not exist if it were not for the determinate cognition of mathematics and natural science, and that the human condition is by its very nature something that needs logic as a negative touchstone. But these two theses can also be applied to transcendental logic. Accordingly the two theses would read (1) transcendental logic has as its end the determinate cognition of the sciences and (2) the absence of intellectual intuition in the human subject makes something like a transcendental logic necessary. By applying these two theses to transcendental logic, we can start to see the way in which the two logics fit together within Kant's overall estimation of the epistemology of the human standpoint.

First, if transcendental logic is read as looking at the material or sufficient conditions of the possibility of truth, then the actual existence of truth must be assumed as that whose ground is to be established. Mathematics and physics represent for Kant historically concrete, necessary, and universal sciences composed of synthetic a priori cognition that can be verified as objectively true or false. It is on the basis of the existence of these sciences that Kant seeks to find the ground of their possibility. The critical question is precisely what must be the case if these sciences are to be possible. The critical project is thus to provide a foundational framework that sets the limits within which our knowledge claims can be said to be either objectively true or false. Mathematics and

physics stay within this framework, while precritical metaphysics strays beyond it. It is therefore the determinate cognition of mathematics and the natural sciences that the transcendental logic frames.

Thus, what we had shown to be the end or purpose of general and pure logic is also the end or purpose of the transcendental logic. Both logics understood as frames converge upon determinate or objective cognition, but they do so from different starting points. The transcendental logic pertains to the possibility of the material correspondence of truth, while general and pure logic pertains to the formal conditions of truth. They both take up the conditions for cognition, the objective determination of what is, and thus taken together they represent the sum of conditions requisite for the material truth of the determinate sciences.

The same argument can be made with regard to the second thesis. How does the denial of intellectual intuition in Kant's construction of the epistemological situation of the human standpoint clarify the necessity of a transcendental logic? First, if we had intellectual intuition, there would have been no cause for the Humean skepticism that roused Kant out of his dogmatic slumber. The idea of the cause would be immediately included in the idea of the effect. There would be no time requisite for the articulation of all that is included in the effect, and there would be no time necessary for the effect to demonstrate what it implies. Skepticism itself on this view only arises because there is doubt about the material truth or falsity of our concepts, judgments, and demonstrations. If we had intellectual intuition, our concepts would not be empty without the influence of sensibility, and so there could be no question of the wrongful application of a concept in a judgment, or a gap in our deduction. In such a case, there would be no necessity for thought to go beyond itself for its content; rather, the content and verification of our concepts and judgments would be given immediately. If we had the divine intellect, truth would be the element of thought, and the question of skepticism could never arise. Not only would David Hume's skepticism become redundant if we had intellectual intuition, the critical inquiry would become so as well. If there were intellectual intuition, there never would have been the history of philosophy that Kant sees as consisting of the continuous and groundless circus of conflicting metaphysical positions and assumptions. If we had intellectual intuition, it would not be necessary for the trial and experiment that is so characteristic of the history of science, nor would it be necessary for there to be any critical inquiry into the conditions or limits of knowledge (either formal or material). If there were intellectual intuition, then a sufficient determination of truth could be arrived at by the intellect alone. But

this epistemological standpoint is not what we are entitled to identify with the human standpoint. We, in contrast to the divine understanding, learn about the world through experience, through the unity of thought and sensibility in time. The critical problem of determining the limits within which we can be said to know only arises because of the absence in human cognition of intellectual intuition. The whole juridical discourse of Kant's first *Critique* sets out the limits of knowledge precisely in response to a skepticism arising from the fact that our concepts are not immediately true or false in themselves.

The epistemological situation of the human standpoint requires inquiry into the conditions of both formal and material truth. As such, knowledge is framed both by the formal rules of thought taken by itself and by the conditions of the unity of sensibility and thought. We have seen how both general and pure logic and transcendental logic have as their purpose or end determinate cognition. If it were not for the determinate cognition of mathematics and natural science, neither of these logics would have any purpose. We have also seen that they both follow from Kant's denial of intellectual intuition. If we had intellectual intuition, a sufficient determination of the truth would be given through the intellect alone, and there would be in that case no possibility of either formal or material error. On this basis I would argue that the frame that logic represents is isomorphic with the frame that transcendental logic represents. By isomorphic, I mean the functional unity of two distinct terms through a third term. I am suggesting that the two logics are homogeneous insofar as they are frames for determinate knowledge, and insofar as they are made necessary because of the absence of intellectual intuition in the human standpoint. The two frames, however, are heterogeneous because they analyze cognition under different conditions. These two logics are heterogeneous with respect to their treatments of cognition, but are homogeneous by being frames for determinate knowledge and by answering to the epistemological shortcomings of the human standpoint. The following section builds upon the isomorphic interpretation by taking up Kant's discussions of the valid and invalid uses of the unconditioned ideas of reason in human thought. It will further develop our charting out of the circuitous route between formal logic and transcendental logic.

(3) The unconditioned as schema of reason

We proposed in the introduction to this book to show the way in which in Kant and G.W.F. Hegel distinct metaphysical assumptions make

possible distinct treatments of formal logic. We aimed in this first part to compare the treatments of quantity in Kant's transcendental logic with those in his general and pure logic. This comparison allowed us to point out how the relation of transcendental logic to formal logic follows from Kant's general standpoint on the limits of human knowledge.

In contrast to mathematics and natural science, we saw that a direct route from the transcendental logic to general and pure logic is not immediately evident. In large part, because formal logic does not involve synthetic a priori judgments or make truth claims, it is not directly implicated in the main accomplishments of the critical philosophy. General and pure logic is a frame for determinate cognition or scientific knowledge, and in this function it is the same as transcendental logic, but because logic itself does not have a direct relation to material truth, it is not directly accounted for by the discourse of the transcendental logic. Thus my 'isomorphic' interpretation of the two logics is possible only by reference to Kant's estimation of the epistemology of the human standpoint. The following develops the isomorphic interpretation further by showing how it holds not only for the Transcendental Analytic but also for the Transcendental Dialectic. Kant's critique of traditional metaphysics and the new role that he assigns to the ideas of reason are consistent with my claims that the transcendental logic should not be read as the ground of formal logic, but can be considered isomorphic with it by reference to Kant's general epistemology of the human standpoint.

(A) The regulative and constitutive uses of the ideas of reason

In the Transcendental Dialectic, Kant identifies reason with the power to think the unconditioned (CPR, A299/B356, A322/B379). By this identification I understand Kant to mean that the task or function of reason is to subsume our cognitions of conditioned objects/appearances under an unconditioned idea. Kant sometimes describes reason as a natural drive or a demand inherent in our cognition to synthesize the series of conditions cognized by the understanding under an idea that is itself unconditioned. The unconditioned ideas of reason are threefold: God, the human soul, and the universe as whole. The first of the ideas is that proper to theology, and is the idea of God as the ultimate author and the final purpose of the physical and mechanical universe. The second is that proper to psychology, and is the idea of the human soul. The third is proper to natural science, and corresponds to the idea of the total system of nature. These three ideas taken together represent the three forms of the unconditioned as it presents itself in human cognition.

Of note is the fact that these three ideas of the whole or totality correspond to the three forms of syllogism Kant accepts from the tradition of logic. The content of the transcendental dialectic, just like the analytic, unfolds in accordance with the accepted terms of traditional logic. These ideas as following from the forms of syllogism are thus each a moment of the category of relation. The categorical syllogism corresponds to the category of substance and its accidents, and the corresponding idea of reason would correlate to the totality of the subject and its attributes – psychology. The hypothetical syllogism corresponds to causality, and the idea of reason would be the totality of the sequence of causes and effects – cosmology. The disjunctive syllogism, corresponding to the category of reciprocity or the community of substances, would be united into a totality under the idea of God – theology (CPR, A334–5/B391–2). The way in which Kant builds his discussion of the ideas of reason on the basis of the logical forms of mediate inference only serves to strengthen our preceding analyses. But this is not the main purpose of the current chapter. What we have to determine now is the function of these ideas of reason and how they contribute to the general epistemological standpoint of human cognition.

Each one of these ideas has two possible uses: either constitutive or regulative (CPR, A671/B699). These are two different ways in which an idea of reason can function in human cognition. By ‘constitutive’ Kant means that the ideas are taken to have a content that can be determined as either true or false. The constitutive use seeks to extend ‘our cognition to more objects than experience can give,’ or extend ‘the concept of the world of sense beyond all possible experience’ (CPR, A671/B699, A509/B537). For Kant, the ideas of the unconditioned do not qualify as objective knowledge because they make a claim about something that cannot be given in a possible intuition, and which is thus outside the bounds of possible experience and verification – ‘they are merely sophistical concepts.’ The error of speculative reason had been to suppose that, even though it could provide no material proof, logical coherence was enough to merit truth. Thus it assumes that, because its cognition can meet the negative conditions of truth, it also meets the material or positive conditions of truth. The critical philosophy is determined precisely in its difference to speculative metaphysics on this point – that the conditions of truth can be met with only if they are both logically valid, and their material truth or falsity can be determined objectively. The critical doctrine, as laid out in the analytic of principles, is that the only valid use of the categories is in relation to the forms of intuition. This implies that the criteria of verification and the conditions for objective

thought are limited to that cognition circumscribed within the bounds of possible intuition. For since our sensuous intuition sets a temporal spatial limitation to the possibility of our objective knowledge, an intellectual intuition could not just be thought in relation to the concepts of the understanding as is typically done, but can also be specifically situated in relation to the ideas of reason. If we had intellectual intuition, our ideas would then have content in themselves, and our judgments and arguments about the unconditioned could be verified objectively. We could understand the soul as it is in itself since pure reason could both be formally valid and materially true. In such a case we would not need experience or any reference of the categories to an object given in sensible intuition for there to be truth, that is, the unity of thought and being. But because our specifically human capacity to know is empty without reference to intuition, since the transcendental time determinations mediate the relation between appearance and what is thought in it, all statements that make a claim regarding something that cannot be related to a possible experience are made in the dark.

Kant famously suggests in the B edition preface (CPR, Bxxx) that the critical philosophy takes something away from knowledge to make room for faith. This 'taking away' corresponds to the verdict that speculative metaphysics has not yet attained the status of science, and has dwelt in large in the realm of illusions – dogma. Here in the transcendental dialectic we see Kant taking the constitutive use of the ideas of reason away from the human standpoint. Reason is left without an objective content in itself. The critical inquiry leaves to theoretical reason a more humble task than it had previously enjoyed. This humble task is what Kant calls the 'regulative' function. Each of the three unconditioned ideas functions to organize the cognitions of the understanding into the form of a system. Kant characterizes this function as providing 'heuristic fictions' that systematize our cognitions within the field of experience (CPR, A771/B799). As heuristic fictions, the ideas of reason are rules for the construction of our picture of the world, but they do not have truth-content in themselves. The only content for the system must come in accordance with the conditions of the valid application of the categories: 'Thus the ideas should not be assumed in themselves, but their reality should hold only as that of a schema of the regulative principle for the systematic unity of all cognitions of nature' (CPR, A674/B702). The ideas of reason hold or have value as frames of our knowledge of the objective world, but not, however, as the content of any metaphysical doctrine about that which stands beyond the bounds of possible experience. Reason leads us to believe that we ought to think of all appearances

as if they were connected with the unconditioned in a system, even though this can never be proven within any given system of cognition. Thus each of the ideas of the unconditioned is a schematic function that brings into systematic unity a particular domain of the cognitions of the understanding. They organize our cognitions that are within the bounds of possible experience. This systematic unity, however, is never present, or actual, but is rather that toward which the drive of reason is oriented (CPR, A306/B363). Just as the imagination can never bring to an image the schemas that unify the sensibility and the understanding, the understanding can never present reason the material that would satisfy its demands for totality and completeness. The two following quotes make this abundantly clear: 'Ideas, however, are still more remote from objective reality than categories; for no appearance can be found in which there may be represented in *concreto*' (CPR, A567/B595), and 'It is a legitimate and excellent regulative principle of reason, which however as such, goes much too far for experience or observation ever to catch up with it; without determining anything, it only points the way toward systematic unity' (CPR, A668/B696). Thus each of the ideas of reason schematizes the determinate cognitions of the understanding into the form of a system that is itself only ever approached. The idea of reason is active in this function of regulating/schematizing, but not as constituting in itself knowledge of the unconditioned or from itself the whole of possible cognitions.

Following this we can say that Kant limits the use of the unconditioned ideas in two distinct ways. First, the constitutive use of the unconditioned is denied, since its claims cannot be materially proven true or false. Secondly, the regulative use of the ideas of reason is limited because the system as a whole can never be given in accordance with the conditions of experience and observation proper to the human standpoint. This implies that the epistemological situation of the human standpoint is such that the whole system of knowledge can never be objective in the same way that anything existing and ordered within that system can be – the part is determinate, while the whole is not.

However, despite the impossibility of the completeness of the system, we should not think that the cognitions of the understanding ever lack this systematic unity. Kant claims that the regulative use of the ideas of pure reason is immanent in the determinate cognitions of the understanding (CPR, A666–7/B694–5). The immanence of the idea of the unconditioned as a schema is at work in the formation of a system of all knowledge in every moment within each particular science. There is no determinate cognition that is not already inscribed within the systematic

coherence demanded by reason. Our thought is immanently ordered by the ideas of the unconditioned, and yet these ideas and the system toward which they orient our thought can never be given in themselves. It is a use of the unconditioned ideas of reason that weaves the concrete determinate cognitions of particular disciplines into a coherent whole, while also situating them in the structural whole of human inquiry.

Most commentators suggest that when Kant says that he takes something away from theoretical reason, he is referring solely to the constitutive use of the ideas of reason. Traditional metaphysics just assumes the validity of its inquiry, and seeks to lay out the determinate characteristics of God, the human soul, and the order of nature. What Kant is seen to take away from knowledge is the standpoint of the absolute, or Baruch de Spinoza's intuitive knowledge *sub species aeternitatus*. But there are in fact two things that Kant takes away from reason in order to leave room for faith: first, he takes away the constitutive use of the unconditioned ideas, and secondly, he also takes away from the human standpoint a position on scientific knowledge as whole. By limiting the ideas to the regulative use, Kant envisions the material sciences, that is, those involved in synthetic a priori cognition of a possible object of experience, as only ever operating on the basis of a provisional determination of the whole. Any particular inquiry within a particular field is a priori oriented to a necessarily proximate rootedness in not only the entirety of that particular field but all the broader/more encompassing branches of inquiry as well.

The first two sections of the third chapter of the second book of the transcendental dialectic give further information that can help us situate the schematic/regulative function of the ideas of reason. These two sections hang together by the thread of Kant's definition of ideal insofar as it is in relation to this term that Kant's subsequent discussion of proofs for the existence of God will proceed. Although Kant compares his use of the term 'ideal' to Plato's use of the idea as 'in the divine understanding' and as 'the original ground of all its copies in appearance,' he claims not to 'venture as high as that.' Ideals do not have 'a creative power like the Platonic idea, but still have a practical power (as regulative principles)' (CPR, A568/B596). The regulative principles, the schema, are thus the ideal, that is, what 'serves as the original image for the thoroughgoing determination of the copy.' Kant is careful to distinguish the function of the ideal as original or archetype from the schemas of the imagination he presented in the first chapter of the analytic of principles. The 'creatures of imagination' are 'not determined through any assignable rule.... These images can, though only improperly, be

called ideals of sensibility.' They are improperly called ideals because they do not 'provide any rule capable of being explained or tested' (CPR, A570–1/B578–9). The point to remember is that the function of the ideas of reason provides an heuristic, an ideal toward which our understanding must necessarily aspire, but which can never be absolutely accomplished, past. Speaking of Leibniz in the *On a Discovery* essay of 1790, Kant writes, 'He also seems, with Plato, to attribute to the human mind an original though by now dim, intellectual intuition of these super-sensible beings...' (249/334). If we had intellectual intuition, not only would the constitutive use of the ideas of reason be valid but the very difference between the constitutive and regulative use of the ideas of reason would be annulled. For, via the principle of thoroughgoing determination, the thing in its individual totality and in its relation to all other knowledge would be determined in thought immediately from out of itself.

(B) The schemas of reason and general logic

The ideas of the unconditioned have a role in shaping and guiding the determinate cognition of the understanding into the form of a system, but not in providing content for our knowledge of the world. The ideas are schemas that are immanent for all those cognitions of the understanding that meet the conditions of material truth outlined in the *Transcendental Analytic*, that is, mathematics and the natural sciences. But do these ideas perform this same immanent schematizing function for general and pure logic? Can we contend that this drive toward the unconditioned is immanent in the structure and order of the traditional logic Kant assumes?

First, let us answer in the negative. The three ideas of reason pertain specifically to the domains of psychology, natural science, and theology. They do not directly apply to logic. As was shown in Chapter 3, the denial of intellectual intuition as proper to human cognition marks Kant's commitment to maintaining a clear boundary between psychology, logic, inner sense, and arithmetic. Psychology is distinct from logic because it takes up its doctrine of thinking nature as it actually is under the conditions of appearances being thought by that thinking nature. But this is not to say that logic treats of cognition insofar as cognition cognizes the thing in itself. Logic as general analyzes cognition independently of any content about which cognition cognizes and as pure is not grounded in the determinate cognition of an existing empirical subject with memories, inclinations, and so forth. Therefore, we cannot take the maxims of the unconditioned that reason provides

to psychology as directly guiding logic. Nor can it be said that logic is directly guided by the unconditioned idea that orders the knowledge of the natural sciences. The idea of the unconditioned in natural science is the schema of the world as a whole. It is the frame by which all evidence concerning the rule-governed phenomenon of nature can be synthesized into a whole. Yet this schema as ordering the cognitions of the understanding pertains only to phenomena or appearances. Math and physics are fundamentally related to determinate objects or appearances that are given through an empirical or pure intuition. Again, this is a relation in which logic does not directly share in its purely formal analysis of cognition. Logic has nothing directly to do with the cognition of moving bodies, velocity or quantity, except as a negative and formal criterion for the possibility of such cognition. Transcendental logic, in contrast, concerns both the conditions of possibility for natural science (in the *Analytic*) and the principles by which its knowledge can be ordered (in the *Dialectic* and in the *Doctrine of Method*). In addition it is also clear that logic would in no way follow from the principles of theology. Logic as abstract from all content is not concerned with positing anything about the truth or falsity of any being, let alone a supreme being. Theology in its precritical form made synthetic *a priori* judgments about objects beyond the bounds of possible verification. The super sensible being is not something that our knowledge is capable of grasping assertorically. We cannot grasp adequately the ideas, as unity of thought and being, but we can suppose them as explanatory assumptions in accordance with which we interpret physical-mechanical phenomena. Logic is not concerned to order the cognitions of the understanding of both rational psychology and rational cosmology according to the schema of a world-author. Logic remains unmoved by the incompleteness of our picture of the world. The ideas of reason in their regulative use directly pertain to those cognitions that amplify or elucidate our picture of the world, and not to logic, which adds no content to this image.

Just as in the *Transcendental Analytic*, we see in the *Transcendental Dialectic* that there is no direct route from transcendental logic to general and pure logic. But should we suspect that there is a circuitous route available to us? The circuitous route we mapped out earlier through the two theses implied a detour through some aspects of Kant's general epistemological commitments. We propose now to forge a circuitous route between the regulative use of the unconditioned and general and pure logic by way of the same two theses.

The first theses would read: the regulative use of the ideas of reason presuppose as their end, the determinate cognitions of mathematics

and natural science. The valid use of reason's three ideas of the unconditioned pertains immediately to the determinate cognitions of the understanding. It schematizes those cognitions of the understanding that follow from the conditions of the valid use of the categories, that is, that can be shown to be materially true or false. But, as we know, before we can determine whether cognition is materially true or false, we have to see whether it meets the formal conditions of truth. In a number of places, as highlighted in Chapter 1, Kant suggests that once we have determined that a judgment is formally valid according to the rules of general and pure logic, then we can evaluate it as to its material truth or falsity. If a given determinate cognition is consistent both with the rules of logic, and with the valid use of the categories, then we know that it can be determinately shown that this judgment is objectively true or false. We can thus say that what is schematized by the unconditioned ideas of reason are those cognitions of the understanding that 'have already' been tested both by the negative touchstone of logic, and the analytic of 'truth itself,' that presented in the *Transcendental Analytic* of the first *Critique*. Logical validity is presupposed by the schematizing efforts of reason, since without logical validity the truth or falsity of the claim could not be verified, that is, nothing that is schematized by the ideas of reason is formally invalid. That for which logic is the negative touchstone is the same determinate cognition that is schematized by the ideas of reason. These two frames converge upon the determinate knowledge of mathematics and natural science. This mutual convergence speaks to the way in which the regulative use of the ideas of reason is homogeneous or coherent with general and pure logic. Transcendental logic and general and pure logic are homogeneous because they converge upon a common end. Additionally, as two frames for the possibility of objective knowledge, they would both be assumed in the regulative use of the ideas. But these two logics are also heterogeneous, because reason as regulative schema does not directly relate to the discipline of logic, as it does to math and natural science. Since logic has no material truth of its own, there can be no direct line of reasoning that could ground the structure of logic on the immanent use of the unconditioned. Transcendental logic sets out the conditions that make possible the objective disciplines of math and science, and as such 'touches' or shares a boundary with the immanent activity of the ideas of reason – that which it makes possible must a priori be systematizable by the schemas of reason. There is a gap or impassable distance between these two logics that correlates to the absence in human cognition of intellectual intuition, and is a reflection of Kant's view that the value

of the unconditioned for human cognition is something that is purely formal and regulative. But this gap appears only if we are looking for a direct route.

The two theses applied alternately to general and pure logic and to transcendental logic sketch the outlines of a circuitous or indirect route between the two logics. Both the ideas of reason in the transcendental dialectic and the conditions for the valid use of the categories in the transcendental analytic frame the same determinate cognition for which general and pure logic is the negative touchstone. The two frames of the transcendental logic and the frame of general and pure logic thus converge upon determinate cognition, as their common end. Yet each of these frames is necessary because of a specific lack proper to the epistemological situation of the human standpoint. The absence of intellectual intuition and the impossibility of the constitutive use of the unconditioned ideas of reason are part and parcel of Kant's claim to take something away from theoretical reason. Yet these deprivations set the scene for an answer to the question 'what can I know'? What can be known from the human standpoint must (a) be in conformity with the conditions of logic, (b) be in conformity with the conditions of the valid use of the categories, and (c) be organized by one of the three ideas of reason. A divine understanding would have no need of such limit conditions, since it would think the object as whole and in the whole 'immediately, and all at once.'

(4) Conclusion

We have claimed that there is no direct relation between transcendental logic and general logic. Yet, we noted in Chapters 1 and 2 how (a) logic acts as a clue for Kant's deduction of the categories and (b) in Kant's lectures on logic the discourse of transcendental logic encroaches into that of general logic in those instances in which Kant tries to depart from the tradition of logic. In the face of the impossibility of a direct route, and yet with the clues that the metaphysical deduction and the 'encroachments' provide, we argued that the two logics are still related via a third term. The two theses showed how the function of the third term mediating the two logics could be taken alternately as determinate science, and as intellectual intuition. The first thesis suggested that determinate cognition is the common point upon which both transcendental and general logic converge. These two logics represent collectively the formal and material conditions of objective determinate knowledge. The second thesis showed that the two logics also converged

around the absence of intellectual intuition. If the human standpoint had intellectual intuition, neither logic as a negative touchstone of formal validity nor the transcendental logic as a critique of the conditions of material truth would be necessary. But just as much as the two logics are homogeneous as frames for determinate knowledge that are necessary because of the absence of intellectual intuition, they are also heterogeneous because they take up cognition from distinct starting points. Transcendental logic concerns an inquiry into the conditions and principles of material truth, while general and pure logic concerns the rules for thought's agreement with itself, and thus represents the conditions of truth taken formally. And it is because of the homogeneity and heterogeneity of these two logics that we have interpreted their relations as isomorphic.

In accordance with the above, and the general conclusions of Chapter 3, we can say that the treatment of quantity in general and pure logic is isomorphic with that of transcendental logic. The conditions of time determination are not directly the conditions for the possibility of the evaluation of the spheres of concepts and their proper formal relation in judgments. Subsumption in general and pure logic is heterogeneous with subsumption in transcendental logic in which the category of magnitude is synthesized with the manifold offered by intuition. Yet their homogeneity can also be posited insofar as both treatments of quantitative subsumption are frames with which any determinate judgment that can be determined to be materially true or false must be in accordance. We cannot think, then, of the transcendental time determinations as the ground for the possibility of a general and pure logic. We can, however, position these logics as distinct frames that have as their focal point the determinate cognition that amplifies or elucidates our picture of the world.

Part II

Logic and Hegel's Speculative Dialectic

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Hegel's Critique of Kant and the Limits of Reflection

The following is a study of two of G. W. F. Hegel's major works of the Jena period. The essay *The Difference between the Fichtean and Schellingian Systems of Philosophy* (1801) and the book *Faith and Knowledge* (1803) both provide us with insights into what Hegel takes to be the project of philosophy in Germany after the emergence of the Kantian philosophy. A careful study of both of these early texts is necessary for understanding the general epistemological ambitions of Hegel's mature philosophy. The critique of Immanuel Kant in *Faith and Knowledge* is especially important because it shows the way in which Hegel anticipates the nature of his mature thought as something that directly answers to the impasses of the Kantian philosophy. Yet such a study of *Faith and Knowledge* remains incomplete without first laying out the orientation to his contemporaries that Hegel establishes in the *Differenzschrift*. A study of these two texts makes clear the way in which Kant's philosophy stands as a backdrop against which Hegel sees German Idealism develop.

The structure of this chapter is as follows: In Part 1, I offer an analysis of the *Difference* essay that highlights the way in which Hegel interprets his contemporaries as responding to the Kantian philosophy. Such an analysis reveals the importance of understanding how for Hegel reflection and speculation represent two distinct ways of doing philosophy. I suggest that Hegel's concept of reflection contains two distinct moments, both of which stand opposed to speculation. In Part 2, I take up *Faith and Knowledge* and develop an analysis of the historical and epistemological characteristics of what Hegel calls the culture of reflection. Part 3 develops an interpretation of Hegel's extended discussion in *Faith and Knowledge* of Kant's theoretical philosophy. From these discussions we can discern two distinct and opposing ways in which Hegel approaches Kant's philosophy: (1) Hegel is simply critical of Kant as a

philosopher of reflection, and posits speculative philosophy as something totally beyond Kant's standpoint, and (2) Hegel praises Kant for attaining the authentic speculative standpoint, but criticizes him for the way he develops this standpoint. Both approaches must be set side by side if we are to fully understand Hegel's early readings of Kant. This chapter concludes by showing how certain methodological principles that have emerged from our analysis of Hegel's Jena period are employed later in Hegel's later works, most notably the *Science of Logic*.

(1) Kant, reflection, and speculation in the *Differenzschrift*

The *Differenzschrift* provides us with a vantage point from which to understand some of the central themes involved in Hegel's early work. For one, it offers us insight into the complex relation between speculation and reflection as two different *styles* of philosophizing. Secondly, it sheds light on Hegel's early views of his philosophical contemporaries (especially Karl Leonhard Reinhold, Johann Gottlieb Fichte, and Friedrich Schelling) and his philosophical predecessors, most notably Kant and Baruch de Spinoza. Ostensibly the *Differenzschrift* is only interested in clarifying for the 'educated public' (D, 5/1) the difference between the philosophical systems of Fichte and Schelling. We shall see in what follows that the respective differences between these systems of philosophy are only adequately understood if one has first grasped the distinction between the spirit and the letter of Kant's philosophy. The following serves well as a prelude to Hegel's direct exegesis and criticisms of Kant's philosophy in *Faith and Knowledge*.

(A) The place of Kant in Hegel's discussion of Fichte and Schelling

Hegel understands not only his own philosophical project but also those of his contemporaries to be rooted in the attempt to go 'beyond' the critical philosophy. Hegel develops a framework, initially put forward by Fichte, for interpreting Kant's philosophy and its reception. This is the distinction between its spirit and its letter: 'It was necessary that the spirit of the Kantian philosophy be distinguished from its letter, and that the pure speculative principle be elevated out of that remaining part of it which belonged to ratiocinating reflection (*räsonierend Reflexion*), or which could have been used for it' (D, 5/1). The spirit of Kant's philosophy is here associated with speculation, and it is to be distinguished from the letter, which is clearly associated with reflection. Why was

this distinction a necessary one? Hegel seems a little unclear on this point, but I believe the following conjectures are far from unreasonable. For one, to understand Kant's philosophy according to the letter is to take it up as a philosophy of reflection and thus to pass over what is essential – the speculative. We will see later the way in which reflection and speculation each have distinct epistemological commitments that entail almost antithetical positions on the limits of knowledge. Hegel agrees with Fichte's judgment that what is essential is the principle of the deduction of the categories. It is this principle that represents the authentic speculative insight and thus the spirit of Kant's theoretical philosophy. Secondly, for Hegel, the philosophical projects of both Schelling and Fichte must be conceived as trying to develop the speculative principle, or the spirit of the Kantian philosophy, into a system. 'It is this principle which Fichte has raised into a pure and strict form, and which he has called the spirit of Kantian philosophy' (D, 5/1). In Hegel's eyes both Schelling and Fichte are trying to lift the speculative principle beyond the letter of Kant's philosophy and to give it its proper or sovereign articulation. By contrast, readers of Kant, such as Reinhold, fail to see the spirit and get mired in the letter of Kant's philosophy. Therefore, because Fichte and Schelling are both trying to develop the spirit of Kant's thought, it is impossible for Reinhold to fully appreciate their respective philosophical systems and to characterize adequately the nature of their differences. On Hegel's reading, only one who recognizes the difference between the spirit and the letter of Kant's philosophy can provide an adequate conception of the respective projects of Fichte and Schelling. Furthermore, it is only once one has grasped the spirit of Kant's philosophy that an advance can be made beyond it.

(B) Kant, reason, and the understanding

Hegel associates the spirit of Kant's philosophy with the identity of subject and object, and the transcendental unity of apperception. He associates the letter of Kant's philosophy with the awkward form in which this identity was presented. It is the form in which Kant presents the speculative insight that has caused all of the controversies over the critical system, and has caused it to be so widely misread. It is such a misreading that Hegel thinks has inspired Christoph Gottfried Bardili and Reinhold to think that the critical philosophy needs a foundation.

Yet it is not only the form of Kant's philosophy but also the standpoint in general of which Hegel is critical. Hegel contends that Kant was able to conceive of the identity of subject and object only from the standpoint of the understanding. He characterizes the understanding

as dualistic, and as able to recognize the truth of only one of a pair of opposing postulates. Yet the spirit of Kant's philosophy and the genuine speculative principle is found in the identity of the object and the subject. And it is this identity that is taken by Hegel to be the mark of the standpoint of reason and not the understanding. How can we understand Kant's philosophy as both bound to the understanding, and yet inspired by reason? It is clear that Hegel sees the two standpoints as coexisting in Kant's philosophy, but the question remains how this coexistence ought to be conceived. Hegel has an interesting way of talking about this coexistence: 'This theory of the understanding has been consecrated by Reason' (D, 6/2). According to Hegel, the dominant standpoint of Kant's philosophy is the understanding, yet it is blessed by the higher standpoint of reason. The word translated as 'consecrated' is *Taufe*. For our general purposes we will accept the word consecrate as expressing that the understanding is influenced by reason such that it is 'lifted up' or cleansed of its one-sidedness. It is clear, however, that Hegel is not identifying Kant's philosophy with reason pure and simple. Kant's presentation of the speculative principle remains mired in the dualisms characteristic of the understanding. To me, Hegel seems quite clear on this point: the dualism consists of, on one side, the identity of subject and object, and on the other, the thing in itself, noumenon, or sensation. This dualism is something that Kant cannot resolve from within his own system. 'The infinite, inasmuch as it is opposed to the finite, is such a "rationality" posited by the understanding' (D, 13/11). Despite the influence of reason, Kant's philosophy is trapped in the standpoint of the understanding. In the passage just quoted, the infinite conceived of from the standpoint of the understanding is something that stands within irresolvable oppositions. These oppositions are then shown to be natural to thought, and responsibility for their resolution is renounced by theoretical knowing – these matters are left to faith. Hegel's major point in these passages is that the actual overcoming of dualism is not possible if we remain within the standpoint of the understanding. To say the same thing differently, the dualisms of Kant's philosophy cannot be overcome if we merely adhere to the letter of his thought. This is precisely what Hegel accuses Reinhold of doing.

What is essential to understanding Kant's philosophy as 'consecrated by reason' is to see it as tending away from the straightforward cognition of the understanding and drawing closer to the cognition of the unity of the opposites. 'When the understanding allows the opposition of the determined and the undetermined, of finitude and the infinite, so that both are supposed to exist at the same time in opposition to one another, it destroys itself...' (D, 17/16). These oppositions 'ought' to be

resolved by reason, but because of the attachment to the understanding, no way is perceived to reconcile them. The reconciliation is projected beyond the domain of theoretical philosophy. So even a philosophy of the understanding, *theorie des verstandes*, 'consecrated by reason' posits a beyond that can be approached only as a matter of faith.

Now Hegel contends that beyond the standpoint of the understanding is that of reason. Hegel associates the standpoint of reason alternately with speculation and spirit. Reason, speculation, spirit, and even the absolute all seem at times to be synonymous. In order to construct the Absolute in consciousness thought "raises itself speculation and has grasped its own foundation in itself.... Speculation is the activity of the one and universal Reason upon itself" (D, 11/9). Yet Hegel can be seen to be maintaining a coherent position that at the same time distinguishes the meaning of these terms. Reason is the standpoint of the absolute that grasps the unity of the dualism from out of itself. The construction of the absolute is the activity and content of reason. Reason and speculation are both related to the absolute in a way that distinguishes them from the understanding and reflection respectively.

This becomes clearer if we start to compare speculation to the dualisms in which Hegel claims Kant's philosophy is mired. In speculation there is nothing over and against thought in relation to which reason determines itself or 'constructs the Absolute in consciousness.' There is no thing-in-itself, noumenon, or 'datum of sensation' that remains outside of or beyond thought. Hegel claims that the standpoint of reason is that where the identity of subject and object in experience and the radical beyond of experience are seen as complementary aspects of the absolute. The irresolvable dualisms of the understanding are resolved in reason, which recognizes both terms of the opposition and the opposition itself as an expression of the self same absolute. 'Reason and sensibility, intelligence and nature.... It is the sole interest of Reason to sublimate such hard and fast contrasts' (D, 13/11). The very object of reason's construction of the absolute is the unity of these opposites. Therefore, what the understanding recognizes as what ought to be, reason takes as its primary actuality. For Hegel, the two faculties of reason and understanding are shown to have distinct criterions of knowledge; what appears to the understanding as the limit of theoretical knowledge is for reason the immanent beginning.

(C) Speculation and reflection

A more careful analysis of the relation between speculation and reflection is necessary to prepare for an interpretation of Hegel's critique of Kant in *Faith and Reason*. I believe that the following associations are indeed justified: reason is equivalent with speculation, and the understanding

is equivalent with reflection. There is much textual evidence to support this, but there are also passages that seem to contradict it. The following section engages these contradictions and offers an interpretation that recognizes two distinct kinds of reflection, which are both to be distinguished from the standpoint of speculation.

A careful reading of the text shows that Hegel most consistently associates the finite and dualistic cognitions of the understanding with the standpoint of reflection, and the absolute cognitions of reason with speculation. This does not seem to be a controversial point. 'Reflection as the capacity of the finite and the infinite which is opposed to it are synthesized in Reason, the infinity of which contains the finite within itself' (D, 18/17). All that this passage establishes is that reflection is associated with the understanding, and both are held in contrast to reason. It claims that the oppositions that characterize reflection are united in reason, but it does not present us with the determinate support for the analogy that we want, that is, reason is to the understanding as speculation is to reflection. The following passage helps make this analogy clearer: 'In order to construct the Absolute in consciousness thought raises itself to speculation and has grasped its own foundation in itself' (D, 11/9). What thought raises itself from is the understanding. What it 'raises itself to' is speculation. Just as we saw earlier in our analysis of reason, speculation is characterized as having no foundation other than itself, and it therefore does not need to posit a thing-in-itself or sensibility as the outside or beyond of thought in relation to which it knows itself. In the same passage Hegel writes, 'Speculation is the activity of the one and universal Reason upon itself.' In speculation there is nothing over and against reason in relation to which reason determines itself or constructs the Absolute in consciousness. The dualisms characteristic of reflection and the understanding are resolved when thought lifts itself to the standpoint of the absolute, reason, or speculation. Thought thus leaves the standpoint of reflection and the understanding behind.

So far it seems clear that in contrast to the understanding and reflection, the standpoint of speculation as the cognition of reason overcomes all dualisms. However, the following passage introduces us to our first set of difficulties: 'Only to the extent that reflection has reference to the Absolute is it Reason and its act a scientific knowing. However, through this relation its work ceases and only the relation exists and is the sole reality of the knowledge' (D, 19/18–19). The first clause of this passage suggests that reflection is not limited to the standpoint of the understanding. Hegel here seems to suggest that reflection *becomes* reason in its reference to the absolute. As such this passage supports the interpretation

of reflection as the broadest category of theoretical knowing. Reflection would include reason and understanding as two different standpoints within itself. In other words, the cognition of reason and that of the understanding are both kinds of reflection. This seems a little more palatable than what I take to be Hegel's more consistent view that reflection and speculation are two distinct styles of philosophizing. But this more palatable interpretation cannot account for the subsequent clause in which Hegel claims that through the reference to the absolute, the work of reflection ceases or comes to an end. This second clause suggests that where the standpoint of reason is assumed, the cognition of reflection is overcome. In this way thought's 'becoming reason' is a becoming that brings one kind of knowing, reflection, to an end, and inaugurates another kind of knowing, reason or speculation. This gives strong support for the view that the cognition of the absolute is not a kind of reflection. Speculation and reflection would be two radically distinct standpoints that correspond to reason and the understanding respectively.

But let us develop more fully the interpretation of reflection as the broadest category of thought by showing which kind of reflection is to be associated with the understanding. 'There is no truth of the isolated reflection of pure thinking, other than that of its cancellation' (D, 19/19). The reflection that is proper to the understanding would be this 'isolated' reflection that is without truth. The only truth proper to this kind of reflection is its cancellation. Is there another kind of reflection? Is this 'cancellation' not the same as the cessation of the work of reflection that we saw before? Does this not provide us, contrary to expectations, more evidence that where reflection ceases, reason begins? No, for the simple reason that Hegel here emphasizes that it is 'isolated reflection' (*isolierten Reflexion*) that is characteristic of the understanding. This allows us to preserve the possibility that speculation would be a kind of reflection that is oriented to the Absolute, and which is not 'isolated.' But the ability to preserve an interpretation is distinct from having direct confirmation of it. We can suggest here only that it is the reflective cognition of reason that lifts thought beyond the isolated cognitions of the understanding into the systematic whole of thought itself.

In discussing and criticizing Fichte's method of philosophy, Hegel provides further support for the idea that there are two distinct kinds of reflection, one associated with reason, the other with the understanding. 'One sees in general that this entire manner of postulating has its ground only in the fact that it proceeds from the one-sidedness of reflection; this one-sidedness demands for the completion of its deficiency, the postulating of the opposed moment which is excluded from it' (D, 29/30). In

contrast to the one-sided or isolated reflection, which can be associated with the understanding, there would be a kind of reflection that is associated with reason. This kind of reflection would recognize the necessity of the opposing postulate, and would recognize the contradiction or paradox as natural to thought. But before we assume that this second kind of reflection is reason, perhaps we should ask whether this is not just what we saw earlier as the 'understanding consecrated by reason?' Is it that Hegel is really suggesting that reflection attains the standpoint of reason, or is it rather that the necessity of the opposed postulate is a reflection proper to the understanding consecrated by reason? If such is indeed the case, which I believe it is, then reflection is always primarily associated with the understanding: either the understanding by itself, as the one-sided reflection, or the understanding consecrated by reason, as the reflection that recognizes the contradiction as natural to thought.

The following quotation presents further problems of interpretation. 'Philosophy, as a totality of knowledge produced by reflection, becomes a system, an organic whole of concepts, the supreme law of which is not the understanding but Reason' (D, 23/23). This passage can be read in two ways and thus as supporting two distinct interpretations. First, it can be seen to suggest that reflection produces knowledge that is then given systematic form through reason. In such an interpretation, reason and reflection remain distinct. The other possible interpretation is that reflection produces the totality of all knowledge in the form of a system. It is not simply that reflection produces finite cognitions of the world and then reason imposes systematic order on those cognitions, as the first interpretation would have it. On the contrary, by Hegel's emphasizing that reflection produces the totality of knowledge, he is clearly indicating that reflection can be oriented by reason alone. As such, reflection is not something that ought to be overcome if adequate knowledge is to be attained. If we interpret reflection as that which gives systematic form to knowledge when it is under the power of the supreme law of reason, then reflection is clearly distinct from the understanding. Reflection as understanding is 'isolated' reflection, while reflection from the standpoint of reason is systematic.

Yet, however strong this interpretation may seem, even within the same paragraph there is evidence supporting the contrary interpretation. Again, in discussing Fichte's philosophy, Hegel writes about the limits of reflection:

It can be required of the system, taken as an organization of propositions, that the Absolute which lies at the basis of reflection also be

present in it according to the manner of reflection as the absolute axiom....for a proposition, as something posited by reflection, is for itself something limited and conditioned, and it demands another proposition for its foundation and so on into infinity. This delusion that something posited only for reflection would necessarily have to stand at the apex of a system... (D, 23/23–4)

Hegel's criticism of reflection here cannot be mistaken. He claims that to think that a proposition of reflection can stand at the apex of a philosophical system is a delusion (*Wahn*). The suggestion here is that it is delusional to think that something posited 'only for reflection' can be taken as a principle for a system. It implies that reflection as a kind of knowledge is not adequate for a first or foundational principle. From this passage it is easiest to maintain that reflection is generally one-sided, rationating, and isolated. In contrast, it is reason or speculation that grasps the organic whole of all thought and constructs the absolute for consciousness. It is thus not that the understanding and reason are two distinct species of reflection. 'Speculation only acknowledges the Being of knowledge in the totality to be the reality of knowledge; everything determinate has reality and truth for it only in the known relation to the absolute' (D, 20/20). It is speculation that is the kind of cognition proper to reason and not reflection. Reflection or the standpoint of the understanding are dualistic and can offer only finite determinations of the infinite or the absolute. It is speculation that grasps the totality of knowledge by virtue of all cognition's relation to the absolute. On this view, reason as speculation could not stand more opposed to reflection and the understanding. It takes as its very beginning and end the unity in thought of the outside and the inside, of the infinite and the finite.

(D) Two kinds of reflection

I want now to make explicit what we have already noticed: it is possible to recognize in Hegel's *Difference* essay two distinct kinds of reflection. Further, both kinds of reflection can be seen to be different from reason or speculation. Once we have recognized this more explicitly, we can become clearer on what Hegel means by the spirit and the letter of Kant's philosophy.

On the one hand, this question of interpretation demands we decide whether reflection always ends in antinomies or whether it is able to resolve them. On the other hand, it asks us to decide how to characterize the kind of reflection that is not one-sided: is it reason, or is it just the understanding that has been consecrated by reason? It therefore asks us

to decide whether reflection is a broad enough category to include within it the standpoint in which the absolute is constructed for consciousness. In one case the spirit of Kant's philosophy is a kind of reflection, while in the other it is an entirely different way of doing philosophy.

There is one passage in particular in which Hegel provides us with the textual support for both an adequate interpretation of the problem and a credible solution. 'To the extent that speculation is viewed from the side of mere reflection, the absolute identity appears in the synthesis of opposed moments and thus in antinomies' (D, 27/28). Here, speculation as the absolute identity appears to 'mere' reflection as ending only in antinomies. But what does this 'mere' of 'mere reflection' imply? Does it imply that reflection is a limited standpoint? Surely. But is this 'mere' just another way of saying one-sided reflection? I do not believe so. I think this 'mere' designates reflection in general, which would thus include one-sided reflection, and another kind of reflection that is still not the same as speculation. Earlier we discussed Hegel's idea of the 'understanding consecrated by reason.' The reflection that recognizes speculative reason as ending only in antinomies has as its basis an understanding consecrated by reason.

Hegel associates one-sided reflection with the standpoint of the understanding taken by itself. It is characterized as one-sidedly isolating a single determination as true, while its opposite is false. Hegel can be said to posit a second kind of reflection when he characterizes reflection as recognizing the necessity of both terms of an opposition being thought in identity. This is the understanding consecrated by reason that can recognize the need for the unity of the opposition, because it sees both terms of the opposition as necessary. This kind of reflection recognizes that a thing is as much what it is in being what it is not, as it is in being what it is. This kind of reflection goes beyond the one-sided postulates of the understanding to show how the opposite postulate is equally necessary, but it itself is unable to resolve this contradiction. This reflection is that which, as quoted earlier, destroys the understanding. Although reflection can recognize this need, because it is grounded in the understanding, it itself cannot think the unity of the opposition. It is at this point that 'the work of reflection passes away' and the genuinely speculative philosophy begins.

On this interpretation, thought according to the understanding is reflection, while thought according to reason is speculation. Therefore our analogy holds: reason is to the understanding as speculation is to reflection. But we now recognize that there are two kinds of reflection. And these two kinds of reflection correspond to two distinct ways in

which the understanding acts as the ground of cognition: in isolated, rationating, or one-sided reflection, it is the understanding by itself clinging to the truth of one of a pair of opposing postulates that is the ground of reflection. Where reflection recognizes (a) the necessary truth of both terms of the opposition and (b) that they ought to be unified, it is the understanding consecrated by reason that grounds our cognition. Yet beyond both of these determinations of reflection, beyond reflection as a whole, is speculative philosophy, which grasps the unity of the opposition as its own concrete or determinate content.

(E) Transcendental intuition and the speculative spirit

I would like to now give a brief description of how speculative philosophy is characterized by Hegel in the *Differenzschrift*. One of the most interesting characterizations of speculation in the *Difference* essay is as *transcendental intuition*. 'In transcendental intuition, all opposition is sublated; every distinction in the construction of the universe through which and for intelligence and of its organization is cancelled. The producing of the consciousness of this identity is speculation...' (D, 28/29). Transcendental intuition sublates what appears to reflection as interminable antinomies. What thus characterizes the speculative standpoint is the recognition of the absolute unity of the opposites, which the understanding cannot resolve. Hegel supplements this characterization of transcendental intuition in a neighboring passage as *transcendental knowing*. But in both cases the function of recognizing opposites in their unity is essential: 'Transcendental knowing unifies both, reflection and intuition; it is concept and Being at the same time.... In transcendental knowing, both Being and Intelligence are united...' (D, 28/28–9). Both transcendental knowing and transcendental intuition serve the same function of bringing to unity what reflection recognizes as an irresolvable antinomy. It is this recognition of unity that Hegel regards as the essential characteristic distinguishing speculative philosophy from that of reflection. In the same passage Hegel writes, 'The producing of the consciousness of this identity is speculation.' This identity of opposites is only possible when speculation recognizes them as both products of reason. Concept and being are recognized as both expressions of the self same reason in transcendental intuition. This is Hegel's view of reason as constructing the absolute for consciousness from out of itself, and not as consecrating the understanding: 'Every synthesis of reason and the intuition corresponding to it, both of which are united in speculation, is, as identity of the conscious and the unconscious, in the Absolute for itself and is therefore infinite' (D, 31/32). Reflection and intuition,

consciousness and unconscious, intelligence and being are grasped as opposing determinations of the same absolute. 'However if Reason knows itself as absolute, then philosophy begins where that style of philosophy which proceeds from reflection ceases: with the identity of the Idea and Being' (D, 29/30). We can thus say that reflection as a *style* of philosophizing comes to an end when (a) reason knows itself as absolute and (b) where the identity of being and idea, of intuition and reflection, is that with which philosophy begins. In other words: where transcendental intuition is, there reflection has ceased and the standpoint of speculation has been assumed.

(F) Conclusion

It is within the context of the distinction between the spirit and the letter that Hegel characterizes the effect of the Kantian philosophy on his contemporaries. I have suggested that Kant's philosophy represents for Hegel the understanding consecrated by reason, or reflection influenced by the speculative. It is the project of liberating the spirit of Kant's thought from the fetters of reflection that binds Fichte and Schelling together. Thinkers like Reinhold and Bardili are unable to recognize the spirit of Kant's philosophy and thus do not take intellectual intuition up as foundational for philosophy – they do not see clearly what is right before them. The project of German Idealism is to give systematic expression to the speculative impulse without weighing it down with the irresolvable dualisms of the understanding. From Hegel's perspective, Fichte and Schelling both take transcendental intuition to be central to their construction of their respective philosophical systems. It is this that Hegel identifies as the spirit of the Kantian philosophy, especially with regard to the identity of subject and object in the transcendental unity of apperception. Yet as we saw at the end of Chapter 4, Kant denies the existence of an intuition that would have immediate conceptual content. Such an intuition for Kant is outside of the human standpoint: the understanding is the sole source for the concepts that, added to our intuitions, provide us with experience. For Kant, something like transcendental intuition is something we imagine God may have, but the epistemological situation of the human being is to be without such a capacity. Although our knowledge strives to connect its cognitions to the unconditioned or the absolute, such a connection can never be determinately completed. It is never something more than an ideal toward which our knowledge strives. In the philosophies of Fichte and Schelling, this striving reaches its object. The transcendental unity

of apperception becomes in Fichte and Schelling the transcendental intuition of the 'I=I'. This transcendental intuition is associated with the standpoint of reason or the absolute, and is the ground from which what Hegel identifies as German Idealism begins. But this standpoint is just what Kant denies in his affirmation that the transcendental unity of apperception is nothing more than numerical identity – it is a logical construct, and to say anymore about it would be impossible. Again, this only serves to emphasize how on Hegel's reading, Kant's thinking stays at the level of reflection: even though Kant himself indicates what ought to be, he is unable to fulfill the natural movement of knowing in its process toward the highest and most adequate standpoint. It is this absolute standpoint that Hegel identifies as the spirit of Kant's thought, but it is a spirit belabored by the mire of reflection and the dualisms of the understanding. We will spend more time investigating this dimension of Hegel's critique of Kant in the following analysis of *Faith and Knowledge*. For now it is enough for us to have noted the distinction between the spirit and the letter of Kant's philosophy as corresponding to the difference between the speculative and the reflective styles of philosophy. It is in this way that Hegel sees the Kantian philosophy as the stage upon which the development of German Idealism takes place.

(2) The history and epistemology of reflection in *Faith and Knowledge*

Faith and Knowledge is the other major work that Hegel completes during his formative Jena period. It is an essential text for my argument because it is the first explicit and sustained reading that Hegel gives of Kant's philosophy. On this point it is consistent with and develops more fully a number of important issues presented in the *Differenzschrift* essay. First, the importance of transcendental intuition is very clearly expressed, and is essential for understanding Hegel's criticisms of Kant. Secondly, and most importantly for this book, the distinction between reflection and speculation is maintained and developed. This distinction between speculation and reflection is essential because it gives us the framework for interpreting the way in which Hegel sees his own treatment of logic and cognition as being the natural progress beyond Kant's philosophy. We shall see that in *Faith and Knowledge*, just as in the *Differenzschrift*, Kant's philosophy is recognized as containing the germ of genuine idealism, but as being too mired in the dualisms of reflection to give a sovereign voice to the speculative principle.

(A) Reflection as historical standpoint

The introduction to *Faith and Knowledge* claims that the philosophies of Kant, Jacobi, and Fichte are in each case exemplifications of a particular way of doing philosophy. On Hegel's view each of these thinkers develops their own philosophical system from within the same standpoint. Hegel refers to the philosophies of Kant, Friedrich Heinrich Jacobi, and Fichte as *reflective* and suggests that together these thinkers complete or exhaust the possibilities of this kind of philosophy. He then contrasts reflection with speculation in much the same way as he did in the *Differenzschrift*. What is unique about the treatment of this contrast in *Faith and Knowledge* is the way in which Hegel understands distinct epistemological standpoints to be the expression of historical movements. We have, then, in *Faith and Knowledge* the recognition of the intersection of history and epistemology that is essential to Hegel's later works. Reflection thus conceived is a set of epistemological commitments that are the expressions of historical developments. The same, then, can be said for speculation.

Hegel actually sees two distinct historical movements expressed in the respective philosophies of Kant, Jacobi, and Fichte. First, Hegel suggests that the Enlightenment is fulfilled in the 'culture of reflection.' The Enlightenment as presented in the introduction to *Faith and Knowledge* represents for Hegel an attitude that takes human finitude to be the standard by which reality can be known. On Hegel's reading, this idea of the finite individual acts as a first principle for the worldview, or standpoint, of the culture of reflection. For Hegel, the Enlightenment philosophy has both theoretical and practical aspects that culminate in the idea of the individual as rational, autonomous, and capable of free activity in all dimensions of life. On Hegel's reading, the specifically epistemological dimension of the Enlightenment worldview consists in the claim that finite cognition is the limit and ground of all possible knowledge claims. This represents the positive contention that the individual can claim to know what can be given as evidence to any individual. If I perform an experiment and am certain that anyone could carry out the same experiment and arrive at the same causal explanation, then I 'know' the result can be determined as objectively true or false. At the same time this position also makes a negative claim: knowledge or any kind of science of the super sensible is impossible because it cannot be repeatedly made evident to any individual. The unconditioned cannot be an object of knowledge in the same way that objects of the physical universe can. This is the major argument involved in the Enlightenment critique of superstition and scholastic metaphysics: only arguments that

can be verified by others can actually constitute an objective contribution to our picture of the world. What is beyond this objective picture of the world is merely a matter of faith and feeling, and cannot be given as something objective or verifiable, that is, as repeatable. The relation of the unconditioned to the individual is left as something 'subjective,' or private, a matter of feeling. What is interesting about Hegel's reading is that in the Enlightenment the individual becomes the sole arbiter of truth at the very moment in which the region of truth is deprived of the unconditioned.

Hegel also sees in Kant, Jacobi, and Fichte the distinct influence of Protestantism, or what he also calls the 'philosophy of the North.' In rejection of the traditional conception of religious authority as mediating the relation of the individual to the divine, the Protestant movement sought to establish the individual as the pinnacle or, as Hegel puts it, the *altar* of religious truth. The only ground of religious truth is the 'heart' of the individual. With the rejection of the hierarchy of authority, much of scholastic or medieval theology was likewise rejected or discredited as dogma. Reason and argumentation were no longer taken to be a direct path to religious truth. The truth of religion is posited as beyond the bounds of objective knowledge. Thus Hegel claims that in the Enlightenment the highest and most valuable ideas of reason are left without validity or credibility. One consequence of this for philosophy but also for culture in general is that the rational cognition of God or the human soul amounts to claims whose validity is beyond the bounds of objectivity – such cognitions are seen as relics of an obsolete past. We are left only with silence in regard to these matters – 'Religion builds its temples and altars in the heart of the individual. In sighs and prayers he seeks for the God whom he denies to himself in intuition, because of the risk that the intellect will cognize what is intuited as a mere thing, reducing the sacred grove to mere timber' (FK, 316–17/57). In order to keep the sacred exalted, the Protestant movement elevates the divine beyond the capacities of human knowledge. Protestantism strips reason of any justification for claims to knowledge in matters of religion because it reduces the individual's relation to the unconditioned to something subjective, such as a feeling or a matter of faith: 'The eternal remained in a realm beyond, a beyond too vacuous for cognition so that this infinite void of knowledge could only be filled with the subjectivity of longing and divining' (FK, 316/56). Just as in his analysis of the Enlightenment, Hegel reads Protestantism as giving absolute authority to the individual at the same time as it denies the possibility of cognition of the unconditioned. On this point Hegel's reading of Protestantism dovetails perfectly

with the worldview of the Enlightenment: both historical movements posit the thinking individual as the sole basis or authority of all knowledge at the same time as they limit what can be known to what is limited or conditioned.

We began this section with the idea that reflection is the completion of two historical movements. What is the essence of these two movements that are fulfilled in Kant's, Jacobi's, and Fichte's respective philosophies? It is the movement that in the same act denies individual cognition of the unconditioned and affirms the individual and the community of individuals as the highest authority with regard to objectivity or truth. It is this double movement that Hegel finds embodied in the philosophies of Kant, Jacobi, and Fichte. The following section aims to outline more specifically the epistemological commitments that follow from this double movement.

(B) Sovereign determinations of reason

This section will show the way in which Hegel thinks of the epistemologies of Kant, Jacobi, and Fichte as so many expressions of the same standpoint. Hegel's critique of reflection as a standpoint suggests not only that it denies to human thought an adequate cognition of the unconditioned but also that its cognition of the conditioned is equally inadequate. What I will be calling a sovereign account is what I believe Hegel intends an adequate account to consist in.

On Hegel's reading, the discourse of reflection culminates in Kant, Jacobi, and Fichte. These discourses of reflection constitute a culture made up of certain common epistemological commitments that manifest themselves in different ways relative to the idiosyncrasies of the particular thinker. Hegel's emphasis is on their sameness: 'All of them agree that, as the old distinction put it, the Absolute is no more against reason than it is for it; it is beyond reason' (FK, 316/56). What they all agree on is a starting point that posits the absolute as beyond reason or knowledge. Correlatively, each of these thinkers reduces the knowable to the sphere of finitude and posits the sphere of the infinite as something proper to faith. 'The fundamental principle common to the philosophies of Kant, Jacobi, and Fichte, is the absoluteness of finitude and, resulting from it, the absolute antithesis of finitude and infinity, reality and ideality, the sensuous and the super-sensuous, and the beyondness of what is truly real and absolute' (FK, 321/62). On Hegel's view, this limitation of knowledge results in a series of irresolvable dualisms. This limitation is a starting point that characterizes the common thread Hegel sees running through their particular philosophies. 'Now a reason that thinks

only the finite will naturally be found to be able to think only the finite' (FK, 322/64). Reflection posits finitude as the limit of knowledge and the infinite as the beyond of knowledge. The consequence of this for the nature of genuine knowledge is that the unconditioned is posited only as something standing opposed to the sensuous and verifiable finite. A discourse of reflection can think the one only with reference to the other, and yet they are held to be absolutely independent of each other. As a consequence, a sovereign account of either term is impossible: 'But since this reason is simply and solely directed against the empirical, the infinite has a being of its own only in its tie to the finite' (FK, 321/63). The unconditioned is constituted in the discourse of reflection only as something that is in relation to or opposed to the conditioned existence of finite things. In this way an adequate account of either is impossible. 'They understood the sphere of this antithesis, a finite and an infinite, to be absolute: but [they did not see that] infinity is thus set up against finitude, each is as finite as the other' (FK, 322/63–4). Hegel's position is that the characterization of the unconditioned or of thought within reflection remains interminably trapped in antitheses. This fact indicates that for Hegel the conception of the infinite from the standpoint of reflection is inadequate: 'This infinite is itself not the truth since it is unable to *consume* and *consummate* finitude' (FK, 324/66, emphasis added). For Hegel, the true infinite must be grasped as consuming and consummating the finite, rather than as simply opposing it by being its other. The true infinite brings the finite to life (or consummates it) in the same moment that it takes it over or becomes it (consumes it). Hegel's critique here is simple: Kant, Jacobi, and Fichte have not adequately conceived of the unconditioned in the first place, nor have they developed the true philosophy of it.

Hegel levels similar criticisms of reflection in the *Differenzschrift*. The true infinite 'nullifies both of the opposed realms by uniting them; for they only are in virtue of their not being united' (D, 17/18). The faulty infinite and the faulty finite are both nullified in the true infinite that Hegel associates with the speculative standpoint: 'Reflection, the faculty of the finite, and the infinite opposed to it are synthesized in Reason whose infinity embraces the finite within it' (D, 17/18). Reason as opposed to reflection is here identified as embracing the finite. 'Through this connection with the Absolute, however, reflection's work passes away; only the connection persists, and it is the sole reality of the cognition' (D, 18/19). The work of reflection passes away, or is nullified in the very moment when thought takes the absolute back into itself as its own most immanent act. This connection with the absolute is what, in Part 1, we saw

Hegel associate with the standpoint of reason or speculation. If we identify what in the *Differenzschrift* is called both the 'nullification' and the 'embrace' of the finite with what in *Faith and Knowledge* is the 'consummation and consumption,' then we can say that the essential movement of the genuine infinite is a synthesis that preserves and destroys the opposition of the finite and the infinite. The 'culture' of reflection refuses to connect the antitheses of reflection with the absolute, because they are already committed to the exclusion of the infinite from the horizon of knowledge. 'Within this common ground these philosophies form antitheses among themselves, exhausting the totality of possible forms of this principle' (FK, 321/62). The culture of reflection makes the sphere of finitude the beginning and end of all knowledge, and accepts the irreconcilable dualisms that result. 'Kant's so called critique of the cognitive faculties, Fichte's doctrine that consciousness cannot be transcended, Jacobi's refusal to undertake anything impossible for reason, all amount to nothing but the absolute restriction of reason to the form of finitude' (FK, 322/64). Let us repeat this for emphasis: they 'all amount to nothing but the absolute restriction of reason to the form of finitude.' This 'amounting to nothing but' is a direct result of the refusal of reflection to think the dualisms of finite/infinite or mind/body in connection with the absolute. The culture of reflection is only too happy to stay within its own boundaries; it is content to leave for faith what it can find no place for in knowledge. To provide an adequate account of either term of the opposition, the standpoint of reason or speculation would have to be achieved, in which the terms of the opposition are seen to be complementary expressions of the selfsame absolute. It is this standpoint that gives a sovereign expression to both since their dependence on one another is nullified and embraced. The true infinite is that which speculation is able to take up as its epistemological starting point. Yet, and this is what the following section shall show, this starting point of speculation or reason is made possible through the overcoming of the standpoint of reflection – it is an absolute beginning that is at the same time the result of the nullification that embraces.

(C) Reflection as transition and discourse

There are two different ways in which Hegel talks about reflection in *Faith and Knowledge* that correspond roughly to the two ways I outlined above in which reflection is discussed in the *Differenzschrift*. Reflection can be either (1) a moment in a process or (2) a standpoint, or culture. It is reflection as a part in the process of coming to an adequate understanding of truth that marks Hegel's treatment of reflection in *Faith and Knowledge* as distinct from that of the *Differenzschrift*.

First, for Hegel reflection is part of the process of coming to authentic knowing. In *Faith and Knowledge*, we begin with the one-sided cognitions of the understanding. The understanding makes judgments about objects, and does not question the possibility of its knowing the objects about which it judges. Also, the understanding affirms the principle of noncontradiction – it assumes that two opposed postulates cannot be true of the same object. It simply says ‘the apple is red,’ or ‘the student works expediently.’ It brings particulars under universals. Next, reflection comes along and disturbs the straightforward simplicity of the knowledge of the understanding. Reflection is described as putting into doubt the straightforward cognition of the understanding by revealing the contradictions implicit in it. Reflection reveals to the understanding that the universal that is predicated of the particular in a judgment is not the only thing that makes the particular object what it is. Equally important is the opposite of that universal that is predicated of the particular. For the thing to be what it is, it must equally be actively the negation of what it is not. I take Hegel to mean that the object’s not being what it is not is just as important for that object as that object’s being what it is. As such reflection leads the understanding into a fundamental perplexity: it appears to violate the principle of noncontradiction if an object is as much what it is in not being what it is not, as it is in being what it is. Reflection introduces this doubt or seed of skepticism into the understanding with regard to the very way in which the knowable is framed. The next step in the process, the third moment on the way to adequate knowledge, is the transition from reflection to speculation. Here the contradictions that reflection reveals to the understanding are resolved through their connection with the absolute. This connection forces thought to seek a standpoint beyond the criterion of the understanding, that is, the principle of noncontradiction. Reflection in this sense is the second step in the process, which must in turn be superseded by another. The virtue of reflection as part of a process is that it impels thought beyond the standards of the finite understanding toward those of infinite reason. Reflection therefore in this sense is a moment in the process that impels thought beyond the understanding toward reason.

Reflection in the second sense in which Hegel uses it is as a standpoint. Reflection becomes a standpoint when it does not allow thought to fulfill the natural movement toward the speculative standpoint. It prevents thought from going beyond reflection. Reflection is no longer a moment in the process of knowing, but takes itself to be the end or the highest standpoint of knowledge. All three members of the culture of reflection are said by Hegel to have failed to let thought take the

next step in the process. They hesitate in the face of the possibility of the cognition of the unconditioned. Yet they recognize that the understanding is not an adequate condition of all knowledge. This reminds us of the *Differenzschrift*, in which both Kant and Fichte are said to provide philosophies of the understanding consecrated by reason. They recognize reason as what ought to be, but are unable to fully transition from the understanding to reason itself.

Reflection thus becomes a standpoint when it refuses to allow thought to transition into speculation. Insofar as reflection is a pure transition from understanding to reason, it is an essential moment in the genesis of the true philosophy. But insofar as reflection refuses to pass beyond itself to the speculative standpoint, it cuts short the natural movement of thought and becomes a fixed standpoint. It is reflection as a fixed standpoint toward which Hegel is more often critical, and which most often functions as a foil by which he develops his concept of a speculative philosophy. It is with respect to both of these two senses of reflection that we must approach and construct our interpretation of Hegel's critique of Kant as a philosopher of reflection.

(D) Conclusion: a humble sovereignty

Hegel notes that the *culture* of reflection regards itself as possessing the virtue of humility because it denies to human thought the ability to know the infinite or the unconditioned. The standpoint of reflection as embodied in these three philosophers takes great pride in having suspended the unconditioned beyond knowledge and making it thereby a matter purely of faith. Hegel criticizes this as a false humility. It is false because it claims that it cannot bring the absolute to mind, and yet still clings to the finite as its basic standpoint. 'Truth, however, cannot be deceived by this sort of hallowing of a finitude that remains what it was. A true hallowing should nullify the finite' (FK, 323/65). The humility of the culture of reflection is false because it makes the finite supreme at the same time as it claims that the finite is what takes away from us the possibility of the cognition of the absolute. It makes the individual the supreme arbiter of truth in the same moment it takes away from truth its cognizance of the unconditioned. The false humility of the reflective philosopher wants us to see that he or she has denied themselves something by exalting the unconditioned beyond the capacities of the human subject. It is as if Hegel wants us to understand that philosophies of reflection gloat over their depriving thought of its highest object. Hegel opposes this false humility and pale truth to a 'true hallowing,' which nullifies or negates the finite. The true hallowing consummates

and consumes, nullifies and embraces the finite 'within' the infinite. The true hallowing is one that restores to thought the possibility of adequate knowledge of the unconditioned.

(3) Hegel's critique of Kant in *Faith and Knowledge*

Part 2 has provided us with an adequate description of Hegel's general characterizations of reflection as a standpoint. We will see in the following the ways in which Hegel claims that Kant is trapped in the standpoint of reflection, and also the ways in which Hegel shows Kant to be beyond it. This will highlight the specific ways in which Kant's philosophy can be said to attain to the speculative standpoint. Yet, just as in the *Differenzschrift* essay, Kant's accomplishments are ultimately sullied by his clinging to the standpoint of reflection. The first part of the following will look at Hegel's critical reading of two dualisms in Kant's theoretical philosophy. As we have seen, the dualisms of a philosophy are sure signs that the philosophy is trapped in reflection. The second part will take note of moments of praise within Hegel's reading of Kant, and highlight the way in which Hegel's portrait of Kant does not reduce Kant's critical philosophy to simply reflection. Hegel's praise corresponds to those moments in which Kant goes beyond the bounds of reflection and catches sight of the speculative idea. But these moments of praise are immediately followed by criticism with regard to how Kant gives voice to this idea. We will see the precise ways in which Kant backs away from the speculative standpoint, and how Hegel sees this as a result of Kant's refusal to recognize transcendental or intellectual intuition as integral to the adequate conception of human cognition. This allows us to offer as a conclusion an analysis of the continuity between *Faith and Knowledge* and the *Differenzschrift*, in which Kant is seen to be moving beyond the understanding but unable to fully complete the transition to reason – he remains committed to the absence of the absolute from the knowledge of the human standpoint.

(A) The critique of dualism and the sovereignty of reason

First, we will look at the way in which Hegel is purely critical of Kant. Hegel argues that Kant is unable to give a sovereign determination of the unconditioned because his philosophy is dualistic. The dualisms at the basis of Kant's accounts of thought and the unconditioned are the following: the dualism within the account of reason itself, and the dualism between reason and the understanding. I give a brief overview of each, and conclude by indicating how a philosophical discourse that

goes beyond these dualisms is the one that follows from the speculative standpoint.

(i) *The dualism within reason itself*

Hegel contends that there is a dualism in Kant's account of reason itself. Upon analysis this single dualism shows itself to be no less than three. Hegel finds within Kant's account of reason the major dualism of form and content. Reason as the faculty of the unconditioned has a merely formal function in human cognition, while it is denied a content of its own. This echoes our earlier remarks about the false humility that denies thought a valid content for its highest ideas. Hegel claims that for Kant reason 'is an absolute, and hence a pure identity without intuition and in itself empty' (FK, 336/81). Hegel's view is that from Kant's standpoint it is impossible for reason ever to have a valid content. Kant's critique of speculative reason ends up removing the unconditioned from the sphere of objective knowledge. Unlike the understanding, reason is never concretely related to something beyond itself with which its ideas could be objectively verified. Pure, and without content, reason is a 'dimensionless activity,' 'held fast in its opposition to the finite' (FK, 336/81). As empty and dimensionless, Hegel emphasizes that infinite reason stands opposed to finitude, which is associated with valid objective content, that is, knowledge. It is this 'standing opposed' that is the mark of Hegel's critique: infinite reason is merely the negation of finite consciousness, and not also something positive in itself. Since all that can be known is finitude, the only knowledge of the unconditioned is that it is transcends our capacities to know.

Hegel's critical reading is not simply that reflection's conception of the unconditioned has its origin merely by abstraction from the empirical. It is rather that the dualism that orients Kant's account of reason has the consequence of giving an account of the terms in abstraction from their concrete relation to their opposite. The unconditioned can be known only within an account of reflection in its otherness to something else, the conditioned. The unconditioned thus represents the unknowable, while the conditioned represents the knowable. Yet reflective discourse abstracts from this dependence or relativity, and gives an account of the infinite as if it stood by itself. Reflection isolates the terms of the dualism and gives an account of each as if they existed independently. To the extent that Kant occupies the standpoint of reflection, he cannot see that the legitimate content of reason in its *constitutive* use is the concrete unity of the opposition. 'Theoretical Reason lets the intellect give it the manifold which it has only to regulate: it makes no claim to an autonomous

dignity, no claim to beget the Son out of itself' (FK, 336/81). If it had this 'autonomous dignity,' it would have content through itself, and this content on Hegel's view would be precisely the concrete unity of the terms of the dualism. This is what we saw earlier as the sovereign voice of philosophy that Hegel associates with reason and speculation.

We can find support for Hegel's reading from within Kant's texts. In the *Critique of Pure Reason*, Kant claims that there are two functions that can be attributed to reason: the regulative one, which is valid, and the constitutive one, which is invalid. The constitutive use of the ideas of reason is invalid because the ideas of reason are beyond the possibility of experience and so cannot be determined as objectively true or false. We can associate this constitutive use with the precritical metaphysics toward which Kant's *Critique* is in general aimed. In contrast to the constitutive use is the regulative use of the ideas of reason, which Kant claims systematizes the cognitions of the understanding. The valid use of the ideas of reason makes no claims about the objective world, but rather orders our understanding of the world into the greatest possible systematic unity. Hegel writes, 'Kant is quite correct in making this empty unity a merely regulative and not a constitutive principle – for how could something that is utterly without content constitute anything? – and he posits it as the unconditioned' (FK, 335/80). The regulative use of the ideas of reason makes no claim to the 'dignity of begetting the son out of itself,' but rather humbles itself by taking the finite cognition of the understanding as its only valid content. Hegel's point here is that the dualisms of form and content, as well as regulative and constitutive, work together to constitute Kant's philosophy of thought and the unconditioned.

There is one further dualism involved in Kant's discussions of reason. This is the dualism of immanence and transcendence. In Kant's discussions the content of the ideas of reason are transcendent, that is, they go beyond the bounds of possible experience and as such cannot be objectively verified. Opposite the transcendence of the ideas of reason is their immanence. The immanent use of the ideas of reason is the valid and regulative one, in which the ideas of reason give form to the content presented by the understanding. So, taking the dualisms together, we can say that on one side of Kant's theory of reason is the immanent, regulative, and formal use, which is valid, while on the other side there is the transcendent content of the constitutive use of the ideas of reason, which is invalid.

For Hegel, the basic problem in Kant's philosophy of reason is the standpoint that orients his discussions. This standpoint makes finitude all that can be known objectively, and banishes the infinite from the horizon of determinate knowing. The finitude of Kant's standpoint justifies the

disconnected or abstract account his philosophy provides of thought and the unconditioned. It is an expression of the false humility that takes the unconditioned away from knowledge and thereby leaves room for faith and feeling. For Hegel, the task remaining for philosophy after Kant is to generate an account of reason itself that can overcome the dualisms of form/content, regulative/constitutive, and immanence/transcendence while not falling back into the groundlessness of precritical metaphysics. We will see shortly the way in which Hegel conceives of intellectual intuition as precisely allowing such an overcoming to take place.

(ii) *The dualism within cognition itself*

The second major dualism involved in Kant's discussions of thought and the unconditioned is that between the faculties of the understanding and reason. Hegel praises Kant for recognizing the distinction between the pure forms of the understanding, the categories, and the pure forms of reason, the ideas of the unconditioned. But he objects that Kant holds too tightly to this distinction. As is typical of reflection, these two orders of cognition have no middle term that would synthesize or envelope them in a larger whole: 'We must leave it [reason] to its own emptiness and the unworthiness that comes from its being able to put up with this dualism of a pure unity of reason and a manifold of the intellect, and from its not feeling any need for the middle and for immanent cognition' (FK, 336/81–2). These two faculties of cognition remain distinct, and their relation to one another remains unrecognized. If there were immanent cognition of the unconditioned, there would be an internal connection or coherence of the faculties. Reflection 'puts up' with the dualisms of finite thought at the same time as it 'feels no need' for immanent cognition. This 'putting up with,' which 'feels no need,' is another indicator that the philosopher of reflection is someone who has turned reflection into a standpoint, and not simply a step in a process toward adequate knowledge. 'Kant did not recognize reason as the one and only a priori' (FK, 330/73). Reason correctly conceived is not something over and against the understanding; it is rather something that brings the dualisms or abstractions of the understanding into the concrete unity that is their truth. It would grasp the pure concepts of the understanding as in harmony with the ideas of reason: 'Inwardly then, the intellect is, and should be, a speculative Idea...but [in Kant] the matter comes to rest with "should"' (FK, 334/78). Kant recognizes that the faculties *should* be seen as part of one and the same whole. Yet this unity is only something toward which our human knowledge ought to strive, not a concrete standpoint from which we can begin to think.

Hegel considers the possibility of interpreting Kant's transcendental unity of apperception as the ground of unity for the distinct faculties of cognition. Yet he remains committed to the claim that because the transcendental unity of apperception is purely formal, Kant's theory lacks any sort of explanatory power in regard to how the different a priori cognitive faculties are actually united in the activity of thought. Hegel's reading seems justified since there is no direct account in the *Critique of Pure Reason* that shows how the immanent and regulative use of the ideas of reason actually schematizes the cognitions of the understanding, nor is there an account of how this schematization would be made possible or unified by the transcendental unity of apperception. The dualism between the understanding and reason goes right to the core of Kant's philosophy: the ground of the unity of the understanding is not thought as being also the ground for the possibility of reason's valid use.

Hegel suggests that the immanent connection of the faculties is precisely the concrete and objective content that Kant denies to reason's constitutive use. Kant's denial has consequences not only for the inadequacy of his account of the unity of the faculties but also for the way in which the faculties themselves are conceived. Hegel's argument is that if the account of the unity of the faculties is inadequate, then the faculties themselves are also inadequately understood. From the standpoint of reflection, on one side stands the understanding with its table of categories and on the other side stands reason with its three ideas. The account of reflection can only give an account of either of the faculties from within the horizon of their opposition to the other. Yet it abstracts from their interdependence in order to give an account first of one, the categories, and then the other, the ideas. On Hegel's reading it is precisely Kant's rejection of infinite thought that forces him to deny to knowledge any resolution or sublation of the abstract opposition between the understanding and reason. Such a resolution could only come about through faith, because the infinite is said to be beyond knowledge and thus thought is only grasped as having its end in the cognition of the finite. Thought is not discussed as 'giving birth to the son from out of itself' for the obvious reason that infinite thought can have no objective content. The dualisms of form/content and reason/understanding are both expressions of the same finite standpoint through which Hegel characterizes reflection. Hegel's portrait of Kant here is purely critical with regard to the way dualism orients Kant's discussions of thought and the unconditioned. We should expect the resolution of these two specific dualisms to be essential to Hegel's own account of the relation of thought and the unconditioned.

(B) Critique and praise: triplicity

The second strategy Hegel employs in his critical reading of Kant contains moments of both critique and praise. Both the critique and the praise are focused on the way in which the form of triplicity finds a place within Kant's first *Critique*. I will first discuss the praise and then discuss the criticism. It is this dual portrait composed of both criticism and praise that must be set beside the portrait that is simply critical if the whole picture of Hegel's critique of Kant is to come into view.

(i) Original unity

Hegel identifies the form of triplicity as the germ of idealism: 'The germ of idealism lies in this triplicity alone' (FK, 335/80). What does this form have to do with idealism? Does this form have any relation to what we talked about earlier as the spirit of Kant's philosophy? Hegel's discussion of the form of triplicity directly shows the way in which the speculative standpoint overcomes the various dualisms of reflection. Thus it is this form that is part of what in the *Differenzschrift* Hegel identifies as the spirit of Kant's philosophy. 'Philosophy is idealism because it does not acknowledge either one of the opposites as existing for itself in its abstraction from the other. The supreme idea is indifferent against both; and each of the opposites, considered singly, is nothing' (FK, 325/68). What is not idealism is a discourse that acknowledges the terms of an opposition as existing independently of, or prior to their opposition. Philosophy becomes idealism when it takes up the opposition in its concrete unity. Idealism is thus only possible when knowledge is oriented to this form of triplicity, which immediately relates to the unity of opposed terms. The emergence of the form of triplicity in Kant's philosophy represents for Hegel the moment when Kant achieves the speculative impulse.

Hegel points to two moments within the *Critique of Pure Reason* that display this form, namely the transcendental unity of apperception, and the productive imagination or doctrine of the schematism. This is not to say that Kant's philosophy in general is a properly speculative idealism. From Hegel's viewpoint, Kant merely achieves the germ of authentic idealism in certain moments, but he does not develop it adequately from beginning to end. Kant is too wed to what Hegel calls the 'false humility' to think human cognition as adequate to the task of grasping the unconditioned.

The first form of triplicity that Hegel discusses is the transcendental unity of apperception. The transcendental unity of apperception is said to bring together the pure concepts of the understanding and the manifold presented by intuition. It links these two heterogeneous orders: 'The

original unity of apperception is called synthetic precisely because of its two-sidedness, the opposites being absolutely one in it' (FK, 328/71). The synthesis produces unity out of the distinct a priori contributions. Here Kant is said to employ the form of triplicity: the unity of apperception is the 'third,' which brings together intuition and understanding. Upon analysis a certain amount of caution must be maintained: Hegel's praise of this part of Kant's philosophy emphasizes the 'originality' or *primacy* of the unity. It is not that the unity of the two abstractions can be posited externally as Hegel claims thinkers like Bardili and Reinhold do. Rather, the merit of Kant is that he recognizes that the opposition must be grasped as *originally* connected through a third term. 'If we sunder the absolute synthesis and reflect upon its opposites, one of them is the empty ego, the concept, and the other is the manifold, body, matter or what you will.... It is from this connection, as original synthesis that the Ego as thinking subject and the manifold as body and world first detach themselves' (FK, 328/71). What indicates to Hegel the germ of Idealism is not that Kant posits some third thing that exists independently of the two opposing terms, and thereby grounds them in a higher unity. What is praiseworthy in Kant's philosophy is something entirely different. In Hegel's eyes the critical philosophy is speculative in that the unity is seen to be original, and the isolated abstractions of dualistic thought are secondary. Kant goes beyond reflection to reach the standpoint of speculation when he recognizes the necessary primacy of the synthesis of the opposition. The primacy given to the synthesis undermines the abstract isolation of the terms in opposition, and thus also the standpoint of reflection in general. This shows that on Hegel's reading, Kant is able to glimpse the necessity of a standpoint beyond reflection. It does not show that Hegel agrees with the way in which Kant understands this original unity.

Hegel gives additional praise in regards to Kant's discussions of the transcendental power of imagination: it is 'a truly speculative idea' (FK, 328/71). It represents another moment in which Kant seizes upon the form of triplicity as a way to organize his philosophical arguments. Hegel reacts positively to the fact that the productive imagination mediates the relation of heterogeneous terms. This mediation is not to be construed as the relation of two already existing and independent terms. 'The productive imagination must rather be recognized as what is primary or original, as that out of which subjective ego and objective world first sunder themselves into the necessarily bipartite appearance and product, and as the sole In-itself' (FK, 329/73). Again, what makes Kant's philosophy genuine idealism is the fact that the mediation

is not secondary or auxiliary to two already existing terms. Rather, the mediation is original: 'We must not take the faculty of productive imagination as the middle term that gets inserted between an existing absolute subject and an absolute existing world' (FK, 329/73). It is not that we have being on one side and thought on the other, and that we are seeking some other term by which to facilitate a relation. The merit of Kant's philosophy lies in recognizing that each term is only insofar as it has a relation to its opposite via a third term.

Hegel praises Kant for taking the problem of the original unity of opposing terms seriously. It is only reflection that abstracts them from their concrete unity, and posits them as rigidly separated in a dualism. In the case of both the transcendental unity of apperception and the productive imagination, the form of triplicity orients Kant's arguments. Hegel's praise thus makes it clear that he does not simply situate Kant within the culture of reflection. In these moments he presents Kant as going beyond reflection and attaining the speculative standpoint. The idealism that Hegel celebrates in Kant corresponds to the form of triplicity, and the fact that the dualism of subject and object was thought through a third term that constitutes their original unity. Hegel's criticisms focus precisely on this unity. Although praising Kant for recognizing the unity as original, Hegel criticizes Kant for the way in which this unity is developed. 'The absolute identity of the subject and the object have passed into this formal identity, and transcendental idealism into this formal or more properly, psychological idealism' (FK, 331/75). Kant's idealism is called formal and psychological for two reasons: its arguments rely on an account of the faculties of cognition proper to the human standpoint of finitude, and their coherence or identity is made possible by the abstract 'I.'

Hegel argues that, because Kant has made it impossible to know the object in itself, all that he has left upon which to ground the original unity is the subject: 'the world is in itself falling to pieces, and only gets objective coherence and support through the good offices of human self-consciousness and intellect' (FK, 330/74). It is the subject that brings unity to the world and makes 'objects' possible. Kant thus makes the subjective side of the dualism the ground of the original unity, and situates both the transcendental unity of apperception and the doctrine of the schematism on the side of the subject. Thus his philosophy is a subjective idealism, and to this extent Kant's Idealism is one-sided. Hegel's reading further stresses that this abstract 'I' is to be distinguished from the ego that is merely one side of the dualism. 'What comes to the fore and enters consciousness is only the product' (FK, 329/72). The

content as ego or object is the product and is external to the original unity of apperception, which remains the purely formal condition for the content of cognition as product. But the criticism of formalism is not merely addressed to the transcendental unity of apperception as the unity but also to Kant's account of what is unified: 'The same thing is regarded, first as idea, then as existing thing: the tree as my idea and as thing; warmth, light, red, sweet, etc. as my sensations and as qualities of a thing, and the category similarly, is posited once as a relation of my thinking and then again as a relation of the things' (FK, 332/76). It is the formal method of Kant's exposition that signals the betrayal of the speculative ideal. The unity is posited as the formal ground both of the subject and the object, one after the other. We recognize on both sides the presence of the same third thing, and it is on this basis that we infer the homogeneity of these heterogeneous elements. However, the inner connection of the terms is not thought, because this unity, which is only formal, can have no content of its own.

A number of aspects of Hegel's treatment of Kant are unsatisfactory. For one, a coherent account of his critique of formalism with the material available is tenuous at best. Secondly, he does not make clear the meaning of his critique of Kant's idealism as psychological. I think that a little work is required on our part to understand this side of Hegel's critique. If we do this work, then I believe Hegel's critique is actually not as problematic as may appear at first glance. First, we can understand the critique of psychological idealism as suggesting that Kantian idealism posits the unity of opposites in the subject, or the individual thinker. This idealism could be psychological to the extent that it points to the faculties of cognition, or the 'good offices of the human subject,' as providing the middle term. The original possibility of the relation of a subject to an object would be the structure that any particular subject brings to experience. What we think about an object and the object we think about are both united, or originally conditioned by the structure of human thought. It is the subject that represents the third thing that unifies the ego and the object in experience. This applies to Hegel's depiction of Kant as grounding the unity of the heterogeneous elements in either the transcendental unity of apperception or the productive imagination.

Another possible way to understand Hegel's portrayal of Kant's philosophy as a psychological idealism is to see it in the light of its opposite, an objective idealism. An objective idealism would ground the original and concrete unity of the subject and the object in the noumenon, or thing in itself. This is, of course, impossible from within Kant's philosophy because the noumenon as such is completely inaccessible to

human thought. In speaking about the productive imagination, Hegel remarks that 'this whole system of principles makes its own appearance as conscious human intellect and so belongs to the subjective side' (FK, 331/76). This is a one-sided idealism, because on Hegel's view Kant fails to grasp that an objective basis for the identity of intuition and concepts is equally as valid as a subjective one. 'It [the original unity] is not simultaneously posited in a heterogeneous way, i.e., an one side as something subjective, and on the other side as something objective, here as unity, there as manifold, which is the one and only way in which opposites and appearances must be cognized' (FK, 332/76). The original unity of thought and being, or mind and world, is not also objectively posited as existing in things themselves. 'It is the essence of formal or psychological idealism to regard a distinction of the kind here represented as being just distinct aspects of my subjective viewpoint...to allow that formal identity to appear to be the main thing' (FK, 332/76). This quotation supports the idea that the criticisms of formalism and 'psychologism' are different aspects of Hegel's single critique of Kant's idealism as subjective.

The essence of Hegel's critique of Kant's idealism is that the subjective viewpoint is situated at the basis of Kant's thinking of triplicity. He cannot generate particularity and difference from within his idealism, because he cannot reach the speculative standpoint that could recognize that there is alongside the subject ground of unity the necessity of a complementary objective unity. On Hegel's view, there is no way for such an objective or heterogeneous affirmation from within Kant's philosophy. So, on the basis of Kant's emphasis on the good offices of the subject and the impossibility of an objective unity, we can feel relatively confident at having an understanding of the critique of psychologism Hegel levels against the way in which the form of triplicity, the germ of idealism, is presented in Kant's philosophy.

The following section will show that an affirmation of objective idealism and thus of a content to the original unity that is not one-sidedly subjective would require intellectual intuition. As we saw in the concluding moments of Part 1 above, it is precisely such an intuition that Kant consistently denies. Hegel in his praise recognizes in Kant the standpoint of speculation, yet what becomes clear in his criticisms of Kant is that he does not think Kant is able to adequately develop the spirit of idealism, or in other words the form of triplicity. Just as in his criticisms of the way in which Kant deprives reason of the objectivity of its unconditioned ideas, Hegel believes that Kant stops short of providing objective content for this original and absolute unity. We turn now to see the way in which Hegel presents intellectual intuition as supplying objective content for reason's ideas of the unconditioned.

(C) Intellectual intuition and triplicity

Transcendental intuition in the *Differenzschrift* represented one of the defining characteristics of the speculative philosophy that Hegel saw in Fichte and Schelling. It was described there as being both concept and intuition, or idea and being. It represented the unity of these opposites, a unity that was unfathomable for reflection. I would like now to present an analysis of the way in which Hegel interprets Kant's position on this kind of an intuition. Hegel's descriptions of intellectual intuition in *Faith and Knowledge* and transcendental intuition in the *Differenzschrift* essay both represent that standpoint that reconciles the dualisms that characterize reflection and the understanding. Yet there is an important difference that we must note. 'Intellect' is the translation of *Verstand*, or the understanding. As such, by intellect we should recognize a faculty of knowing distinct from reason, since it would seem that intellectual intuition would refer to the understanding and transcendental intuition to reason. Transcendental intuition and intellectual intuition are thus two different concepts. But from Hegel's reading of Kant's discussions of intellectual intuition we can discern their similarity of function. Both intellectual intuition and transcendental intuition are meant to designate the recognized unity of opposed postulates. However, when Hegel refers to intellectual intuition, he is referring to the conception of this function as beyond the limits of human cognition – this is why it is associated with the understanding. When he refers to transcendental intuition, he is designating the immanence in the human standpoint of that function. In other words, intellectual intuition refers to what Kant could only suggest ought to be but is not, while transcendental intuition designates what is actual in the construction of the absolute by reason. Yet in *Faith and Knowledge*, in discussing Kant's views, Hegel adopts Kant's terminology. He takes up the *anschauungen der Verstandes* and identifies it with what in the *Differenzschrift* essay is referred to as transcendental intuition. So following Hegel, we will use intellectual intuition as referring both to that which in Kant ought to be, and what in Fichte and Schelling is actual.

This is coherent with the fact that nowhere in *Faith and Knowledge* does Hegel disclose his own views on intellectual intuition. In both the *Differenzschrift* and in *Faith and Knowledge* Hegel articulates the views of his contemporaries on this issue. It could even be said that in the *Differenzschrift* essay Hegel merely adopts the terminology of Schelling when speaking of transcendental intuition. One could thus go further and say that nowhere does Hegel present his own theory of transcendental or intellectual intuition – especially since he seems to drop the idea around 1803 when Schelling leaves Jena for Würzburg. However, if

we are observant, we can notice that in the background of his discussions of Kant's views some of Hegel's own stand out. And these views bring to the forefront Hegel's own esteem for Schelling's philosophy, and the role attributed to transcendental intuition therein. Through such observations we can start to more clearly emphasize the way in which transcendental or intellectual intuition represents for Hegel in his Jena period the key element that distinguishes reflection from speculation. As such it is transcendental intuition that would mark the advance of philosophy beyond the letter of Kant's philosophy to the authentic spirit of German Idealism. It would also be the essential mark that would distinguish an advance of Hegel's own epistemology beyond Kant's.

(i) *A general description*

Hegel's description of Kant reveals something important about the relation between speculative philosophy and intellectual intuition in Hegel's Jena period. Hegel connects the fact that Kant does not 'allow the work of reflection to pass away' to his refusal to 'pass over into' the idea of intellectual intuition. On Hegel's reading Kant falls back into the discourse of reflection because he cannot reconcile his critique of speculative reason with the concrete existence of an intuitive intellect.

It will be useful here to look at some of Hegel's remarks on Kant's view of intellectual intuition. This will allow us more clearly to understand the connection between the speculative standpoint and intellectual intuition. 'The idea occurs [to Kant] here only as a thought' (FK, 341/89). From this one simple passage we can note two things that help us to understand the way in which Hegel describes Kant's relation to the idea of intellectual intuition. First, the idea 'occurs' to Kant. Elsewhere Hegel writes that the idea 'hovers' before Kant. Hegel wants us to realize that Kant considers the idea of intellectual intuition – it is not something that Kant does not think about. It is as though Hegel presents Kant as 'entertaining' the idea of intellectual intuition, almost toying with it. Secondly, Hegel describes Kant as considering the idea of intellectual intuition 'only as a thought.' It is the 'only' that is significant, since it implies there are other aspects of the idea that did not occur to Kant. The key element in Hegel's description is that Kant entertained the notion of intellectual intuition, but did not take it seriously. Ultimately Kant sets it aside as outside or beyond the limits of the human standpoint. I will argue that on Hegel's reading it is because Kant grasped the idea of intellectual intuition inadequately that he was able to dismiss it the way that he does.

This is not of course to downplay the significance that Hegel gives to Kant's decision to set aside intellectual intuition. On the contrary, Hegel suggests that Kant's entire conception of reason can be explained by reference to his view of intellectual intuition: 'Before we go on to show how this idea of an intellect that is also a posteriori or intuitive hovered very clearly before Kant, how he expressed it and consciously destroyed it again, we must consider what Reason can amount to, if it refuses to pass over into this Idea' (FK, 335/80). It is as though Kant's philosophy of reason can be understood precisely by reference to his position on intellectual intuition. In Hegel's portrait the idea of an intellect that is intuitive hovers clearly before Kant, who examines but ultimately refuses to accept it as pertaining to the human standpoint. Hegel's portrait is in fact more subtle since he depicts Kant as someone for whom intellectual intuition is a question. According to Hegel, Kant *decides* that intellectual intuition is beyond the capacities of human cognition. This decision has as its consequence the fact that the unconditioned ideas of reason are left without a valid content in themselves. They are reduced to a purely formal function in regulating the cognitions of the understanding. This is another moment in which Kant's philosophy seems to fit perfectly into Hegel's designation of it as a philosophy of the understanding consecrated by reason.

(ii) *The concrete and original unity of opposites*

But how does Hegel imagine the relation of speculative philosophy to intellectual intuition? How is this definitive step beyond Kant and the culture of reflection best described? Is the intellectual intuition that Kant is talking about the same as the one Hegel is discussing? A major difficulty in answering this question is that *Faith and Knowledge* is primarily an exegetical work, rather than a doctrinal one. Hegel's views can be discerned only by extracting them from his discussions of his philosophical predecessors. But it is perhaps not surprising that in his discussions of the views of others, we find Hegel divulging some of his own.

In the first important passage Hegel characterizes the intuitive intellect as simultaneously a priori and a posteriori: 'We will touch later on the still purer idea of an intellect that is at the same time a posteriori, the idea of an intellect as the absolute middle' (FK, 335/80). How should we understand Hegel's description here of intuitive intellect? Is it at once outside of experience and a result of experience? Is it both the form and content of thought from the standpoint of the Absolute? Hegel promises to add more to this brief account later, but does not fulfill this promise. He discusses the intuitive intellect again in his discussions of Kant's

third *Critique*, but these discussions only serve to sharpen his criticisms of Kant's view, rather than to expound more fully his own view. More thorough explanations of his own view are perhaps not to be expected from Hegel in his exposition of Kant's philosophy. He presents intellectual intuition only insofar as it is an idea that Kant happened upon and refused, not as he himself understands it. But Hegel's understanding of intellectual intuition can be described through an analysis of the way he characterizes Kant's view. In the passage just cited, Hegel equates 'a posteriori' and intuition. It is in contrast to either that the qualification of 'a priori' stands. Thus we can say that intellectual intuition is an intellect that is a priori and a posteriori. The intuitive intellect seems to be defined as a contradiction – how could something be both a priori and a posteriori? From the standpoint of reflection, this seems like nonsense. In another passage Hegel's emphasis on intellectual intuition as the unity of opposites is almost excessive. The idea of intellectual intuition is characterized as 'an intellect for which possibility and actuality are not sundered, in which universal and particular are one and where spontaneity is at the same time intuitive' (FK, 341/89). In this single passage we see no less than three dualisms that are united in the intuitive intellect: possibility/actuality, universal/particular, and spontaneity/intuition. By 'spontaneity' I take Hegel to be referring to Kant's distinction between spontaneity and receptivity. To say that spontaneity is at the same time intuitive (receptive) implies that cognition does not need something outside of itself from which to draw content for its ideas. Intellectual intuition is that for which opposites are one, in which the two terms are neither sundered nor abstracted from their relation to one another, but are seen in their concrete unity. And so we begin to see the way that the form of triplicity orients Hegel's account of intellectual intuition.

The following passage is interesting because it reveals yet another dualism that intellectual intuition resolves, thus adding to Hegel's general account of Kant that discussed earlier. 'Kant has here before him both the idea of a reason in which possibility and actuality are absolutely identical and its appearance as cognitive faculty where they are separated. In his experience of this he finds both thoughts' (FK, 341/89–90). Kant, who has 'both thoughts' hovering before him, could choose the identity of possibility and actuality in thought, or he could choose their separation. For Hegel, we must understand Kant's decision as conditioned by the way in which he frames the issue. Kant denies intellectual intuition, partly because he defines intellectual intuition as the cognition of transcendent objects. His critique of speculative metaphysics is conditional upon the denial of intellectual intuition, for

otherwise there would be no room for faith. Our ideas of the unconditioned would be capable of having content; they would not be empty and without any hope of objective certainty. As a result, Kant turns away from the problem of answering how an intellect can be possible and actual, universal and particular, a priori and a posteriori. On Kant's view such an intellect is divine, and beyond the limits of the subjective and finite standpoint of the human subject. Kant turns away from the idea of an intuitive intellect because he associates it with precritical and dogmatic speculative metaphysics. From Kant's perspective, if metaphysics is to become science it must recognize that the cognition of the unconditioned cannot be determined as objectively true or false. For Hegel, in order for metaphysics to be possible it requires 'an intuition for the idea of reason in which the idea would be experienced as purely finite and sensuous and simultaneously and contiguously experienced as a super-sensuous beyond of experience' (FK, 339–40/87). It is this *experience* of the ideas of reason as both finite and infinite that Kant denies. Hegel presents intellectual intuition as the capacity to provide content to the ideas of reason, which does not fall back into precritical metaphysics. In other words, Hegel affirms through intellectual intuition precisely what Kant denies: a valid content for the constitutive function of reason. Kant turns away from the possibility of a genuine or rational use of the constitutive function of reason for the sake of the consistency of his critique of speculative metaphysics. 'An intuition for the ideas of reason' is the intuitive intellect whose content is the unity of the distinct terms of the finite opposition. In the passage just cited, intellectual intuition cognizes the unity of the super-sensuous and the sensuous, just as in earlier passages it grasped the unity of particular and universal, of possibility and actuality, and of a priori and a posteriori. This concrete unity is the content of which Hegel believes reason is capable, which does not fall into the mistake of precritical metaphysics, since this concrete unity or content is not transcendent, but immanent. 'Kant admits the possibility of this. He admits this is one way of looking at it. Nonetheless he sticks to the viewpoint from which it is absolutely sundered; and what is cognizant of it is thus strictly contingent, an absolutely finite and subjective cognitive faculty which he calls human' (FK, 342/90). Kant's denial of intellectual intuition is consistent with his critique of the constitutive use of pure speculative reason. It is precisely on the basis of the absence of intuition that Kant argues that the ideas of reason cannot be objectively true or false, and thus that the dualisms of reflection cannot be resolved within the field of knowledge. Intellectual intuition, on Hegel's view, supplies the very objective content that Kant

denies. It remains blind. Intellectual intuition 'occurs to Kant only as a thought. Notwithstanding its admitted necessity, reality must not be predicated of it. On the contrary, we must once and for all accept the fact that universal and particular are inevitably and necessarily distinct' (FK, 341/89). Hegel's sarcasm here expresses his insight that the distinction of universal and particular is nothing in itself from the standpoint of speculation. 'Once and for all' signifies that, from Hegel's view, Kant makes his decision and leaves no room for debate. Kant preserves the humility of reflection by turning away from intellectual intuition and 'putting up with' the separation of the opposites as the truth/limit of knowledge. On Hegel's account, it is intellectual intuition precisely that is the concrete unity of opposites. It is intellectual intuition that restores to reason its sight of the world.

This is in essence identical with the way in which intellectual intuition was presented in the *Differenzschrift*. There we saw that transcendental intuition is precisely that which brings together the opposites that reflection can only grasp as antinomies. It is the expression of the speculative standpoint that starts off where the work of reflection ceases. From the standpoint of reason or speculation, these opposites are the complementary expression of the absolute that is constructed for consciousness. In *Faith and Knowledge* as well, it is intellectual intuition that is the determinate difference between speculation and reflection. It is intellectual intuition that allows us to see the identity of a priori and a posteriori, spontaneity and receptivity, thought and being.

(iii) *Intuitive intellect and reflective thought*

What is essential to see in the preceding examples is the way in which intellectual intuition is positioned as the absolute middle or original unity of opposites. In each of Hegel's discussions of Kant's view on intellectual intuition, it is presented as the absolute middle between two distinct and opposed elements. This leads us to what is really the best clue we have with regard to Hegel's general position on intellectual intuition in *Faith and Knowledge*: intellectual intuition as absolute middle should be interpreted as the expression of the form of original triplicity. Hegel claims that intellectual intuition is that whereby the original unity of the heterogeneous elements is not only formal and subjective but also has content and is objective. It thus returns to reason its constitutive use without falling back into the dogmatism of precritical speculative metaphysics. And this is the best evidence of the identity between transcendental intuition in the *Differenzschrift* and intellectual intuition in *Faith and Knowledge*. In both cases the dualisms of the understanding

are reconciled through their unification through a higher standpoint, a third element. This identity of transcendental intuition and intellectual intuition as functions in cognition is also attested to by the fact that in both cases it is something that Kant refuses.

The description of Kant as recoiling from the speculative moment and returning to reflection as the only ground for claims to know is marked by a refusal of the idea of intellectual intuition. Kant is depicted as making the leap from reflection toward speculation through the idea of triplicity in the transcendental unity of apperception and the schemas of the transcendental imagination, but Kant hesitates, recoils, and turns back to the 'security' of reflection and the principle of noncontradiction. Kant 'puts up with' the dualism of (a) the regulative and the constitutive role of reason, and (b) the dualism of the understanding and reason. Kant's claim is that there is no ground for claiming objectivity concerning the ideas of reason – they have no valid content in themselves. This content is for Kant beyond the human standpoint. All human knowledge is capable of is the deductive certainty that there is a transcendental unity of apperception, and the faith that it is not merely a logical ground, but also a real one. It is best to remember the characterization of Kant's philosophy in the *Differenzschrift* as that of the understanding consecrated by reason. In the characterization in the *Differenzschrift* of Kant's philosophy of that of the understanding consecrated by reason, we see that Kant is not a philosopher of speculation or reflection to the exclusion of the other. Hegel's reading of Kant is best characterized as a philosophy caught in the transitional movement between the two standpoints. As such a figure, Kant inspires or sparks German Idealism, but cannot give full expression to it. It is up to Fichte, Schelling, and perhaps ultimately Hegel to do that.

(4) General conclusion

Reflection on my interpretation of Hegel's Jena writings represents for the most part a style of thought that has at its basis the one-sided cognitions of the understanding. The understanding tells us something about the world. For example, it says: 'This tea is hot.' The understanding knows that the tea cannot be hot and cold at the same time. This sort of knowledge is what we saw Hegel refer to alternately as rationating, one-sided, or isolated reflection. I have claimed that on Hegel's reading there is another kind of reflection that functions more as a middle ground between the understanding and reason. Reflection oriented by the understanding or 'consecrated by reason' reveals the contradictions

that underlie the one-sided understanding. It shows that the tea's not being cold is as essential to the tea as its being hot. What a thing is and what a thing is not equally express the 'state of affairs' in question. Hegel emphasizes the way in which this sort of reflection pushes the understanding to destroy itself. But we saw how this destruction is a nullification or cancellation that embraces – it is not simply an end point. This destruction of the understanding is a necessary moment in the natural movement of thought in its process to adequate knowledge. The standpoint of reason as it constructs the absolute for consciousness is the highest and final stage of knowledge, and stands beyond and embraces the oppositions of the understanding. It is ultimately then the terminus of the natural movement of thought through the stages of its epistemological development.

From this perspective Kant's philosophy is thought in transition or becoming. It has a glimpse of that toward which it is heading, yet it is still connected to that from which it departs. Hegel contends in such moments that Kant is a member of the culture of reflection that we discussed at the beginning of the second section of this chapter. As such Kant represents the arresting of thought from its natural movement and its entrapment within the bounds of reflection and the understanding. What Kant takes as the end of knowledge and the beginning of faith is for Hegel simply the boundary point at which 'the work of reflection comes to an end' and the speculative philosophy begins.

In both the *Differenzschrift* and *Faith and Knowledge* it is intellectual or transcendental intuition that distinguishes the epistemological conditions of reflection and speculation. In both texts intellectual intuition represents the concrete unity of opposed terms. It is this unity that reflection sees as irreconcilable within the sphere knowledge and thus a question of faith. As Hegel reads Kant, it is Kant's commitment to the absence of intellectual intuition that impedes his progress from reflection to speculation.

In *Faith and Knowledge* speculation is further distinguished from reflection in Hegel's discussions of triplicity. In both texts Hegel characterizes Kant as achieving the speculative impulse, but only to fall back into the dualisms of the understanding and thus reflection. In the analysis of the *Differenzschrift* we saw the way in which Hegel characterizes Kant's philosophy as grounded in the understanding consecrated by reason. Kant's philosophy bears the traces of the absolute in its spirit, but in its form, letter, or presentation it is ruled by the understanding. Kant is too tied to the denial of the objective cognition of the unconditioned for him to give more than a passing glance to intellectual intuition. Yet

Fichte and Schelling, and ostensibly Hegel as well, take intellectual intuition to be central to the philosophical project of German Idealism. As Hegel reads Kant, it is Kant's commitment to the absence of intellectual intuition that impedes his progress from reflection to speculation.

But should we expect transcendental intuition to play as important a role in his mature works as it does in *Faith and Knowledge*? Is it transcendental intuition that propels spirit through the various forms of the subject-object relation in the *Phenomenology of Spirit*? Is transcendental intuition the engine that drives the unfolding of the absolute idea in the *Science of Logic*? No. If all we had before us were the texts of the Jena period, it would seem reasonable to expect that Hegel's later works would utilize transcendental intuition as a methodological principle. As we have already noted, Hegel starts to drop the idea of transcendental intuition as a key distinguishing mark of speculative philosophy in approximately 1804, precisely around the time that Schelling leaves Jena. The *Phenomenology of Spirit*, which Hegel finishes four years after *Faith and Knowledge*, is more concerned with the dialectical movement of spirit than it is about intellectual intuition. By the time of the *Science of Logic*, intellectual intuition is hardly mentioned at all, yet the dialectic has become central to the unfolding of the absolute idea. In the beginning of the following chapter we will highlight explicitly the way in which dialectic arises in Hegel's more mature works as the replacement of transcendental intuition as the key to speculative philosophy. Regardless of certain differences, it is still speculation that is a style of philosophizing that overcomes the dualisms that plague lesser forms of knowing. It is still speculation that is identified with the only adequate epistemological standpoint. Further, even though speculation is no longer specifically identified with intellectual intuition, it is still oriented by the form of triplicity. In his mature works this form of triplicity has become the natural movement of the dialectic. It is the dialectic that is able to grasp oppositions as complementary expressions of the absolute.

We are now ready for our concluding chapter, which will provide a concrete analysis of the way in which the *Science of Logic* provides an account of formal logic. We will look at the way in which speculative dialectic is the key methodological principle for the unfolding of the absolute idea. The *Science of Logic* is this unfolding, and on Hegel's view it is only from within the context of such an unfolding that an adequate treatment of formal logic can be given. The merit of Hegel's account of logic and the way in which it goes beyond Kant's, is that it situates logic in relation to all the other existing moments of cognition and science. Formal logic is not a discipline that exists, as Kant would have it, as the

outer-courtyard of science or as something propaedeutical to knowledge. Formal logic on Hegel's account is a result of knowledge (as a moment in the third volume of the *Science of Logic*, it is the result of the two volumes that have come before), and an integral part in the process of recognition of the whole of human cognition. As we have gathered from our analysis of reason in Hegel's Jena works, there is no outside or beyond of reason – reason includes all moments of knowing within itself as its own content.

6

Truth and Judgment in Hegel's *Science of Logic*

This chapter provides an account of G. W. F. Hegel's treatment of judgment in the *Science of Logic*. I focus on what Hegel calls the judgment of reflection. The judgment of reflection is what Hegel refers to when he deals with the different quantifiers possible in the relation of the subject and the predicate in judgments. It is on the basis of Hegel's metaphysical commitments that his discussion of quantity in judgment can be distinguished most clearly from Immanuel Kant's. I will argue that these commitments are manifest in the assumptions, method, and standpoint in accordance with which Hegel's *Science of Logic* unfolds.

This chapter has four major sections. The first outlines certain basic features of the *Science of Logic* that make clear the novelty involved in Hegel's treatment of the traditional content of logic. The second part provides a discussion of what is involved in an adequate account of the judgment of reflection. Part three is a concrete analysis of the dialectic of the reflective judgment with its three moments of singularity, particularity, and universality. Part four is a conclusion and summary, in which I compare and contrast Kant and Hegel on the universality of judgment in light of their respective metaphysical and epistemological commitments.

(1) Dialectic and truth

(A) Introduction

Hegel's approach to the traditional doctrines of logic is novel. Part of the novelty is that because of certain methodological principles, each part of the *Science of Logic* is in relation to every other part. An adequate treatment of any moment of the *Science of Logic* must comprehend it from multiple levels and sides. This means that it must be seen in the context

of the whole of the *Science of Logic*. The project of this chapter itself is to unfold the meaning of the reflective judgment in just such a way. Only by doing so will we be able to evaluate Hegel's claim to go beyond the Kantian critical philosophy.

No one would doubt the novelty of Hegel's account of the discipline of logic in the *Science of Logic*. But this novelty does not happen in a vacuum. In fact the novelty of Hegel's treatment of formal logic should only be understood by reference to the other instances of novelty in Hegel's philosophy. Hegel claims that the revolution he inaugurates in his construction of logic must be understood to follow from a fundamental commitment to a new method of doing philosophy – speculative dialectic (SL, 37/53). This transformation in method represents one of the consequences of Hegel's shifting away from the idea of intellectual intuition as the basis for the standpoint of reason. Yet what stays the same through Hegel's early and mature works is a certain basic relation to Kant – what for Kant was transcendent of the limits of knowledge, the unconditioned, is, according to Hegel, immanent in thought. The project of this book is to trace out the way in which this 'becoming immanent' of the absolute idea has consequences for the way in which Hegel thinks about the traditional discipline of logic.

The consequence of this novel metaphysical standpoint turns out to be methodological: it is method that represents the way in which Hegel can restore truth to metaphysics without falling back into the dogmatism of which Kant was critical. The project of this current chapter is to show how this transformation in method has effects on the way in which the traditional content of logic is conceived. The *Science of Logic* is a radical departure from the tradition of both metaphysics and logic simultaneously. Although I am primarily interested in Hegel's departure from the tradition of logic, it is easy to see that in order to understand Hegel's transformation of logic, we must grasp it as simultaneous with the revolution in metaphysics.

Metaphysics and logic are clearly differentiated for Kant. This differentiation is most apparent in the *metaphysical deduction* of the first *Critique*, in which general and pure logic acts as the clue by which the transcendental logic is constructed. In Kant's theory these two discourses are clearly separate, yet in practice each is integral to an understanding of the other. What is the place of the traditional logic in Hegel's *Science of Logic*? Hegel's account of logic (concepts, judgments, and syllogisms) is metaphysical, because it is a moment in the unfolding of the absolute idea – logic is as essential to metaphysics as ontology. And as we will see, logic for Hegel is as much an element in or an aspect of our picture

of the world as is chemistry, geometry, psychology, and the rest of the sciences.

The preface to the first volume of the *Science of Logic* makes clear how both metaphysics and logic have suffered from the effects of the *culture of reflection*. Protestantism and the Enlightenment emphasized freedom of thought and the sovereignty of the individual, but took away from thought the capacity to objectively know the unconditioned. I suggested in the previous chapter that one of Hegel's major philosophical ambitions is to overcome the culture of reflection and its metaphysical and epistemological failures. In Hegel's Jena writings, it is intellectual intuition that overcomes Kant's denial of truth to the ideas of reason, while in his later works it is the speculative dialectic that places in the temple of thought the holy of holies (SL, 6/25). The following will show that this fundamental ambition is the basis for (a) the novel coincidence of logic and metaphysics, and (b) the novel treatment of the traditional content of logic.

(B) Dialectic and method

(i) *The Phenomenology of Spirit and the emergence of dialectic*

Hegel's mature standpoint implies that it is only dialectic as system that connects the *Phenomenology* to the *Science of Logic*. The *Science of Logic* refers to the *Phenomenology of Spirit* as its propaedeutic. More generally for Hegel, philosophy proper, as system, gets underway as the culmination or result of the *Phenomenology*. Further, if we take Hegel at his word and recognize the *Science of Logic* as the actual restoration of truth to the ideas of reason, then we can say that this accomplishment is possible only following the *Phenomenology*. What the *Phenomenology* is said to make possible is an absolute beginning. The *Science of Logic* is considered to be absolute or presuppositionless. How can we understand this architectonic paradox seemingly at the heart of Hegel's philosophical system? First, we must recognize both the *Phenomenology of Spirit* and the *Science of Logic* as expressions of dialectic. It is as different facets of dialectic that the presuppositionless science can be seen as a result.

The *Phenomenology* is itself a beginning. If it is argued that the germs of dialectic were already to be found in Hegel's earlier works, then what the real novelty of the *Phenomenology* represents is a systematic dialectic – where the dialectical process unfolds progressively through the set of all relevant stages. Hegel's early Jena writings must be considered prior to the emergence of dialectic as the method of systematic exposition. The systematic dialectic in the *Phenomenology* represents the process of spirit's coming to recognize itself by overcoming all inadequate epistemological

standpoints. It is systematic by virtue of the progressive unfolding of inadequacies culminating in the realization of absolute knowing. Dialectic in Hegel's mature works is productive or positive in the sense that it is the method adequate to articulate the system of philosophy from the absolute standpoint. Thus, dialectic in Hegel's *Phenomenology of Spirit* means something different than it does in Kant's *Critique of Pure Reason*. Kant's dialectic results in the revelation of the natural illusions perpetrated by reason. This negative result leaves reason with only ideals, antinomies, and paralogisms, but no determinate knowledge. The ideas of reason, although useful in practical philosophy, cannot be known in theory. Hegel's dialectic, in contrast, is entirely positive, since it restores to reason a determinate and objective knowledge. Dialectic in the *Phenomenology* is progressive and has as its positive result a standpoint without assumptions. In both Kant and Hegel, dialectic is associated with reason. In Kant, however, dialectic reveals the incapacity of the human standpoint to know the unconditioned, while dialectic in Hegel becomes the means to reveal the objective immanence of the unconditioned in all thought.

The end of the *Phenomenology* is the dialectical accomplishment of absolute knowing. This accomplishment at the same time represents the commencement of the unfolding of the absolute in thought. Once the *Phenomenology* is complete, the absolute can unfold from itself. The dialectic of the *Phenomenology* results in a dialectic of the *Science of Logic*. The standpoint that is realized at the end of the *Phenomenology* is what unfolds in the *Science of Logic*, and is best construed as the unity of thought and being. In other words, the *Phenomenology* is the presupposition as clearing the way for absolute knowing, and the *Science of Logic* is presuppositionless because of the very progressive labor of the *Phenomenology*.

The *Science of Logic* presupposes the results of the *Phenomenology*, while the *Phenomenology* results in absolute knowing, that is, presuppositionless knowing. The question remains, however, whether the propaedeutic to the system is to be considered part of the system proper. Also, how are we to understand the relationship of the *Phenomenology of Spirit* to the 'phenomenology' section of the *Encyclopedia*? If we identify the *Phenomenology of Spirit* with the section in the *Encyclopedia*, then clearly the content of the *Phenomenology of Spirit* in Hegel's mature view is not propaedeutical. Certainly such research continues to be valuable in this field, but for the purpose of this project such questions can only be approached from within the orientation of this book. Although I will in the following be undertaking to interpret the dialectic as Hegel

conceives it in the *Science of Logic* and the *Encyclopedia*, I believe it necessary at least be to clear that I do not find any reason to renounce the idea of the dialectic of the *Phenomenology* as the propaedeutic to a presuppositionless science.

(ii) *Dialectic in general?*

One might expect that the conception of dialectic would be the same throughout the propaedeutic and the whole of the system. One could expect that the dialectic is a method that is applied to any and all subject matter – that its process is not contingent upon its content. But it could also be expected that the dialectic would always be changing relative to its content and situation – as the content develops, so too would the dialectic. The dialectical method is a direct and even perfect reflection of its content; its form is dictated by the matter. One finds support for both characterizations within Hegel's writings. All this indicates is that they are not necessarily incompatible characterizations – the dialectic follows a pattern that is always adapted to the exigencies of the subject matter at hand.

In the following I will focus for the most part on discussions in which Hegel tries to lay out the steps of the dialectical process 'in general.' Most frequently it seems to be Hegel's intention to represent dialectic as a method that is consistent throughout its various applications. Once we have done this, we will be able to look at the way in which it specifically adapts itself to the traditional content of logic. We will thus have shown that the dialectical process can be stated in general, and also recognized in its contingent relation to its content.

In the *Science of Logic* in its 1812 and 1816 versions, there is no direct discussion of the dialectical movement in general. Unlike the *Encyclopedia in Outline* of 1817 and largely the 1827 edition and the *Lectures on Logic* given in the winter semester of 1831, the *Science of Logic* does not present us with an outline of the dialectical movement that will run its course throughout the whole of the work. There is, however, in the preface to the second edition of the *Science of Logic* (1831), a direct but not unambiguous discussion of the nature of the dialectical process in general. 'The understanding determines, and holds the determinations fixed; reason is negative and dialectical, because it resolves the determinations of the understanding into nothing; it is positive because it generates the universal and comprehends the particular therein' (SL, 8/28). If we take Hegel at his word, we can think of the dialectic in general in the following way. The starting point is the understanding with its fixed determinations. Reason is next and has two aspects to it: one as the negation of the determinations of the understanding, and

one as the positive 'comprehension' that resolves the process. Are these two aspects of reason to be construed as two distinct steps? Or should they be seen as two different sides to the same single step beyond the understanding? First we should ask, what does it mean to resolve the fixed determinations of the understanding into nothing? Negative reason 'negates what is simple, thus positing the specific difference of the understanding' (SL, 8/28). The negation here posits the specific difference of the understanding by negating the simple determination. The negation thus makes room for subsequent or more 'comprehensive' determinations, and differentiates reason from the simple fixations of the understanding. Not only does negative reason distinguish the understanding but also in this very act it elevates itself from the determinations of the understanding through their resolution into nothing.

In *Faith and Knowledge* and the *Differenzschrift*, we saw this same negative function described by Hegel as the work of reflection. Reflection negates the simple and abstract positings of the understanding and reveals the necessity of a higher determination of truth. The work of reflection ends when the standpoint of the speculative begins. In the *Science of Logic*, negative reason fulfills this same or a similar function, and to this extent can be safely described as in general the second moment in the process. We can then say that negative reason clears the way for the positive function of reason, but is not that function itself. Positive reason recognizes the universal that underlies or is implicit in both the simple affirmation of the understanding and its negation by negative reason. It makes the unity implicit in them explicit. It determines the unity of the simple (the understanding) and the concrete negation of the simple (negative reason). This is similar to those passages in *Faith and Knowledge* in which Hegel points to intellectual intuition as reason, which recognizes the unity of the understanding and reflection. It is an intellectual intuition wherein this identity is given. The link of understanding-reflection-reason in *Faith and Knowledge*, becomes understanding-negative reason-positive reason in the *Science of Logic*. Such an interpretation of 'stages' or 'steps' is not definitively supported from within this passage because it is conceivable that, together, the positive and negative moments of reason constitute the single event of reason, over and against that of the understanding. The negation of the understanding presupposed in this interpretation immediately leads to the determination that follows from reason. This determination is both the negation of the understanding and a more comprehensive positive determination. The following passage only adds to the ambiguity of how to interpret the nature of the second and third moments: 'But it

does not stay in the nothing of this result but in the result is no less positive, and in this way it has restored what was at first simple, but as a universal which is within itself concrete; a given particular is not subsumed under this universal but in this determining, this positing of a difference, and the resolving of it, the particular has at the same time already determined itself' (SL, 8/28). The first part of this passage seems to indicate that the negative result is at the same time positive, leading us to believe that it is a mistake to think of the second and third moments as following one after the other. And yet do we not find in the last part of this passage the expression of the process as composed of three distinct parts? It is at least clear that the positive function of reason is the recognition of the concrete determination of the particular that results from the negation of the simple fixation. It also seems clear that negative reason, but not positive reason, has a direct relation to the understanding. Positive reason seems to function as the positive unity of both moments. Negative reason seems to have a direct relation to the understanding and its abstract and simple determinations. Therefore it seems reasonable to imagine that there are indeed three discrete steps, in which negative reason acts as a transition point from the standpoint of the understanding to the standpoint of reason. In the preceding quotation, positive reason is equated with the self-determination of the particular. It is as if Hegel wanted us to see the understanding as actively *applying* concepts to the object it claims to know – the understanding determines the particular. Positive reason on the other hand seems to be able to let the object determine itself. As such, positive reason recognizes the unfolding of the previous moments as the unfolding of the particular. We will have cause to talk more exactly about this later when we talk about the standpoint of the speculative logician, but for now let us shift to other texts in which Hegel provides an account of the dialectical process in general.

For the present discussion, we find relevant passages in the *Encyclopedia Logic* of 1817 and 1827, the *Zusatz* to the 1827 edition, and the *Lectures on Logic* from a course given in the winter of 1831. In the *Encyclopedia*, we find the same three moments as outlined above. They are said to be moments in 'every logical entity, that is, of every notion and truth whatever' (EL, 79/113). To the extent that we regard every moment of the *Science of Logic* as a 'logical entity,' then every moment of the *Science of Logic* would pass through these stages. The *Encyclopedia* characterizes the first moment as corresponding to the standpoint of the understanding, which sticks 'to the fixity of characters and their distinctness from one another: every such limited abstraction it treats as having a subsistence

and being of its own...' (EL, 80/113). The understanding is not only simple but also abstract. The simple characterization is abstract because it affixes to the object a single universal it does not think as in relation to the rest of the properties of the object. The color of a thing is one thing, its internal temperature another. This stage of knowing is inadequate as it is based on isolated properties of the object. There is no living coherence to the distinct determinations. The second aspect is the 'dialectical side or that of negative reason' (EL, 79/113). Hegel again characterizes the function of negative reason to be that whereby the simplicity and abstractness of the determinations of the understanding are *revealed* as inadequate. 'But by Dialectic is meant the indwelling tendency outwards by which the one-sidedness of and limitation of the predicates of the understanding is seen in its true light, and shown to be the negation of them' (EL, 81/116). This revealing of the one-sidedness of the understanding is the negation of its adequacy. The claim that dialectic is 'an indwelling tendency outwards' shows us negative reason as a tendency of what begins in the understanding outwards. 'In the dialectical stage these finite characterizations supersede themselves, and pass into their opposites' (EL, 81/116). The understanding of the understanding is superseded by the determination of negative reason. The negation of the simple and abstract determination of the understanding is a result of the immanent or indwelling tendency of the determination to pass over into its opposite. Negative reason or dialectic is what allows thought to realize its object as having this indwelling tendency to move beyond the isolated determinations of the understanding. Negative reason reveals the object as something that exceeds any simple determination of the understanding. Through this negation the possibility of its being known beyond the standpoint of the understanding is disclosed. The stage of positive reason in the *Encyclopedia* is characterized as the speculative stage. There is thus the stage of understanding, dialectic (negative reason), and speculation (positive reason). 'The Speculative stage, or stage of Positive Reason, apprehends the unity of terms (propositions) in their opposition – it is the affirmative, which is involved in their disintegration and in their transition' (EL, 82/119). The speculative stage recognizes the unity of the object through the object's simple and abstract fixedness and the negative-dialectical revealing of its passage into its opposite determination. This is similar to the way in which Hegel in the *Science of Logic* associates positive reason with the recognition of the determination as the particular determining itself. 'The result of Dialectic is positive, because it has a definite content or because its result is not empty and abstract nothing, but the negation of certain specific propositions which

are contained in the result – for the very reason that it is a resultant and not an immediate nothing...it is concrete not formal unity' (EL, 82/119). It is possible that one could think that through the first two stages the object would have been reduced to the merely formal unity of both the simple affirmation of the understanding, and the negative insistence of its not being a simple property. As a formal unity the particular object would remain exterior to our knowledge of its properties. Thus negative reason would result in the negative revelation of the inadequacy of the understanding. A form of skepticism would emerge because the thing-in-itself would remain transcendent to knowledge as indeterminate in all its isolated determinations. This skepticism would be the result of what Hegel calls external dialectic, a use of reason that only results in the utter impossibility of a determination of the unity of the object that would resolve the tension between the understanding and the dialectical negativity. External dialectic lacks the moment of positive reason. The internal dialectic of negative reason makes possible the determination that is both the truth of the object and the unfolding of thought itself. Internal dialectic is the result of the *Phenomenology of Spirit*: the unity of thought and being. On positive reason, Hegel writes, 'The result of going beyond contradiction is concrete, since it is the oneness of the different determinations. This is what is *positively rational*, in contrast to what is dialectical or *negatively rational*' (LL, 82/74). Negative reason is the event of the contradiction, as the negation of the isolated determination of the understanding. To comprehend the object is to recognize it as the concrete unity of these specific determinations, and thus the negation is recognized as proper both to thought and the object. The contradiction is undone in the accomplishment of the speculative stage of positive reason.

The *Lectures on Logic* give us further valuable insight into the nature of the dialectic in general and positive reason specifically: 'The first side which it presents is the abstract, understandable side. The second side is dialectical or negatively rational. Immediacy and mediation are the two thought determinations corresponding to these first two sides.... The third side of the logic is the speculative or positively rational. It brings the first two determinations together in their unity, unseparated from each other' (LL, 79/72). Here we see that the three moments in every logical entity are immediacy, mediation, and unity. The understanding is not only the simple, isolated, and abstract determination but also the immediate. The dialectical moment, or that of negative reason, is identified with 'mediation,' thus adding to its determinations of negation and 'passing into opposites.' Mediation is therefore the indwelling

movement outwards. The speculative is not only the concrete unity of the opposing and preceding moments but it is also the recognition of their inseparability. The highest stage of knowing is not only the unity of thought and being but also their original and concrete unity. Positive reason recognizes that the antithesis is necessary to the self-unfolding of the concrete logical entity. The antithesis makes possible the determinate recognition of the object as revealed in this process. The standpoint of speculative reason can thus be defined as the actual unity of thought and the object, of method and content.

(iii) *Two senses of dialectic*

There are two senses to the word 'dialectic' as I am interpreting Hegel. First is the sense of dialectic as the second stage in the unfolding of any particular logical entity; it is associated with the stage of negative reason, the second of three moments. The second is the sense of dialectic as the title for the unfolding of the process as a whole, that is, the transition from understanding to negative reason to positive reason is the dialectic. In the first sense, dialectic differs from the understanding and positive reason. In the second sense, dialectic is the living thread of all moments of possible knowledge:

The method of the logic is the absolute rhythm of all that is alive, the truth of everything in particular spheres in general, inclusive spheres. Spinoza said that we must apprehend things under the aspect of eternity. But eternity for him is the rigid substance. True eternity is this true speculative process, once we quietly allow the content to come into its own fullness and contemplate it upon its own self-showing. (LL, 82/75)

Dialectic as containing all three of the moments in the process of knowing is what Hegel refers to here as the true 'speculative process' – the highest moment. Speculative reason is identified as the whole of the process itself. It is the speculative process that unfolds according to the three moments of understanding, negative reason/dialectic and positive reason.

The tone Hegel presents in his *Lectures* is interesting. He emphasizes *quietness*, suggesting by this the way in which we allow the content to come into its own fullness and contemplate it upon its own self-showing: this relatively passive attitude must be seen as the complement to the active process of knowledge itself. In other words, the speculative process is quiet because it allows the unity of thought and its object to unfold.

'What is speculative is to know objects as they are upon themselves, to apprehend them as a process. What is speculative cannot be expressed in simple judgments. The speculative process cannot be contained in a fixed proposition, for any such proposition is one-sided. What is true is the continuing process with its three moments given in advance' (LL, 82/75). As a continuing process, what is called speculative is knowledge of an object that moves through the three moments. Dialectic in the sense of the whole process through the three steps is what is here called the speculative process. By 'given in advance,' Hegel means that for every logical entity this three-part process is the natural rhythm of its self-determination. But does this imply that dialectic is a fixed method that is applied to anything and everything irrespective of what is being treated? The answer to this question must be both yes and no.

(iv) *Dialectic and contingency*

The second paragraph of the Doctrine of the Notion in the *Encyclopedia Logic* provides an account of the speculative process (dialectic) that recognizes the contingency of the method upon the specific content it is treating. It thus offers us a nice contrast and supplement to the idea that the speculative process of dialectic is a fixed process, 'given in advance' of its content. One passage of interest is the following: 'The onward movement of the notion is no longer either a transition into, or a reflection on something else, but Development' (EL, 161/224). Now the fact that this statement about method does not come in the early part of the *Encyclopedia* as a methodological principle can cause us to question to what extent this can be construed as a defining statement as to method. Yet the fact that Hegel repeatedly says through the *Science of Logic* that certain truths about the method can only arise through the work of the dialectic itself can reduce this uncertainty. The *Zusatz* to this paragraph in the *Encyclopedia* echoes this statement: 'Transition into something else is the dialectical process within the range of Being; reflection (bringing something else into light), in the range of essence. The movement of the notion is development: by which that only is explicit which is already implicitly present' (EL, 161/224). Here we see that the dialectical movement is contingent on the content that unfolds. In the Doctrine of Being, the form is transition into something else; in the Doctrine of Essence, it is the 'bringing something else into light'; and in the Doctrine of the Notion it is the making explicit what is already implicit, or development. Each book of the *Science of Logic* should thus be interpreted as determined by a unique kind of dialectic. Yet each of these different aspects of the dialectical process contains the same three basic forms: immediacy, mediation,

and speculation. The basic underlying process stays the same, while the way in which the content is approached by this process is always indexed to the particular content. It is in the transitions that the contingency of the dialectic is discernable. So although there are three moments of the method given in advance, there is still an element of contingency or dependency whereby the method adapts itself to or is the expression of the particular nature of its content.

(v) *The speculative logician*

'To be a speculative logician is to apprehend opposite determinations within their unity' (LL, 82/74). This phrase, 'to be a speculative logician,' provides us with a way to understand the nature of the dialectic in the *Science of Logic*. It also provides us with a way to understand Hegel's claim that the three moments in every logical entity are not to be construed as subsisting independently. The speculative logician is one for whom the three moments are recognized each in its truth as passing into one another. They are seen as passing into one another because they are recognized as the unfolding of the same unity. This immanent unfolding of the unity is the content that the quietness of this kind of logician allows. The stage of the understanding passes into that of negative or dialectical reason, which itself passes into the speculative stage.

From this discussion of the method of the *Science of Logic* as both 'given in advance' and contingent, we can now look at the important novel claim that logic is not only a necessary but also a sufficient condition of truth. We have seen that the meaning of dialectic as the whole movement through three distinct stages can be contrasted with dialectic as the second stage of the process, that of negative reason. The speculative logician is the one for whom adequate knowledge is achieved. The speculative logician recognizes the unity of the different stages as both (a) the process of thought ascending to adequacy and (b) the object coming to determine itself from out of itself. To be a speculative logician is not merely to attend to the third stage in the process, but rather to attend to the whole process itself. It is dialectic in the sense of the movement of the whole process that has this logician's attention. Yet at the same time the quietness of the speculative logician is also such that the contingency of the process on the object is recognized. It is not that the dialectical method is just applied from without to any object. The quietness corresponds to the ability of the logician to allow the differences of the content to lead the unfolding. In the *Zusatz* to paragraph 24 in the *Encyclopedia Logic*, Hegel writes, 'When we think, we renounce our selfish and particular being, sink ourselves in the thing, allow thought

to follow its own course, and if we add anything of our own, we think ill.' The speculative logician *lets* thought and the thing develop naturally, organically. In other words, they mutually evolve in a coherent system. The renunciation that keeps quiet is for Hegel what thinking is. The *Lectures on Logic* puts the same point this way: 'In philosophy we have to do with the matter itself, and with the surrender of self-conceit. Aristotle held that we ought to make ourselves worthy of knowing the matter at hand. This matter, this substance, God, truth, has being upon and for itself. We must make ourselves worthy by raising ourselves up to the level of that matter. We make ourselves worthy when we leave our peculiarities behind' (LL, 23/14). We must get out of the way if thinking and the absolute are to unfold in unity. The *Science of Logic* as a whole can be framed as the beginning of a thinking that keeps quiet.

(C) Truth and logic

The following is an analysis of Hegel's reading of the assumptions, method, and standpoint of the traditional conception of logic. These traditional elements are all interrelated and constitute the background against which the novelty of Hegel's own treatment of logic can be discerned. As we have seen, the assumption of the *Science of Logic* is the *Phenomenology*, the method the dialectic, and the standpoint that of reason.

(i) A novel coincidence

There are two assumptions at play in the traditional conception of logic that Hegel calls into question. Hegel's discussion of these assumptions points out how they follow from the particular method used in treating logic. On Hegel's view, Kant maintains both these assumptions, and so in the following I will use Kant as representative of the tradition Hegel challenges.

The first of the assumptions is that logic is merely the formal condition of truth. Logic is a necessary condition for truth because it provides the frame within which all cognition must take place, but it does not provide us with a way to evaluate the specific content of the cognition or argument. It is therefore insufficient when taken by itself to provide a sufficient determination of truth. Kant describes logic as the outer courtyard of knowledge – it is a path that must be traversed if one is to enter into the field of determinate knowledge. Yet logic itself does not constitute objective knowledge. Logic alone cannot take us all the way to science or truth itself – it concerns only the form of thought, not its content. One of the novelties of Hegel's *Science of Logic* is a break with

this traditional assumption that logic is not a sufficient condition for truth. As we will see, by restoring to reason its constitutive use, all particular moments of thought are only adequately conceived when they are situated in the overall process of the dialectical process. The traditional elements of logic, that is, concepts, judgments, and syllogisms, in the *Science of Logic* are each expressions of the unfolding of the absolute idea and thus moments in the development of truth itself. No longer is logic a mere propaedeutic to truth, but rather is as much the direct expression of truth as any other.

The second assumption rests upon the supposed distinction between logic and philosophy. Our analysis of Kant's 'discussions' of logic showed that in the moments in which Kant departed from the tradition of logic, he provided philosophical-transcendental justifications. The properly philosophical did not arise in Kant's lectures on logic when he was simply presenting the traditional doctrines of logic. Even in the first *Critique's* metaphysical deduction, logic is presented as an already established discipline without need of philosophical justification. Hegel claims that (a) since the *Phenomenology* is the presupposition of the *Science of Logic*, (b) since the end of the *Phenomenology* is the standpoint of philosophy proper, and (c) since Hegel's treatment of the traditional doctrines of logic in the *Science of Logic* can be considered nothing but philosophy, logic is not something preliminary to real knowledge.

But Hegel's incorporation of logic into philosophy proper is even more radical. Logic and metaphysics since Aristotle stood as radically distinct disciplines or sciences. Logic represented the formal analysis of the rules of thought independent of any relation to a determinate object or class of objects. Metaphysics was traditionally contrasted with logic because metaphysics dealt with (a) god, (b) the universe, and (c) the soul, that is, objects that transcend the realm of possible experience. Logic on the other hand concerns only the analysis of the form of thinking itself, but not the cognition of any kind of object. Metaphysics and the sciences in general all have a specific class of objects about which they amplify or clarify our knowledge. One of the most surprising claims of the *Science of Logic* is the claim for the coincidence of logic and metaphysics. This is one of the most revolutionary claims in the text, and it signals a departure from the history of philosophy perhaps more radical than any before it.

The novelty of Hegel's *Science of Logic* is thus the double coincidence of truth and logic, and philosophy and logic. The distinctions the tradition assumed are challenged directly in Hegel's account. Hegel's departure from the assumptions of the tradition of logic is the result of his reconceptualization of the method of treating the forms of logic. The method

Hegel advocates 'breathes life into the dead bones' and transforms them into logical entities, as he states in the *Encyclopedia*.

(ii) *Logic and truth*

Hegel claims the *Science of Logic* is a reconstruction of logic. What does it mean to reconstruct logic? The *Science of Logic* is said to breathe life into the dead bones of the tradition. Why is such a rejuvenation of the forms of logic necessary? Hegel writes that spirit, 'after its labors over two thousand years, must have attained to a higher consciousness about its thinking and about its own pure essential nature' (SL, 35/51). Hegel's suggestion is that the changes in politics, religion, and science that have occurred in the last 2,000 years must have their mirror in logic as well. But how are we to understand this labor of spirit and its relation to the *Science of Logic*?

The relation of logic and truth is the dominant theme in the introduction to the *Science of Logic*. The nature of this relation is addressed also in the *Encyclopedia Logic*, the *Zusatz* to the *Encyclopedia*, and the 1831 *Lectures on Logic*. Without giving an extended commentary, I would like instead to isolate a set of passages that are of central consequence to the project of understanding Hegel's departure from the tradition of logic.

The third paragraph of the introduction of the *Science of Logic* gives us a clear impression of the way in which Hegel understands the traditional conception of logic. The entire paragraph is intended to portray the way in which the history of logic has operated within the distinction of form and content. It also indirectly makes clear the step beyond tradition that Hegel sees as necessary. Hegel's revised conception of logic hinges upon the claim that logic does not need to go outside of itself for an objective content. 'When logic is taken as the science of thinking in general, it is understood that this thinking constitutes the mere form of a cognition that logic abstracts from all content and that the so-called second constituent belonging to cognition, namely its matter, must come from elsewhere...' (SL, 28/43–4). Hegel emphasizes that truth involves the material relation of thought to an object. Logic conceived of as 'abstract' and 'merely formal' indicates the poverty of logic when it comes to objective truth. The matter of cognition must originate somewhere beyond thinking itself. There must be an 'outside of thought' from which some kind of matter or content is presented to thought. This material relation of thought to an object is something external to logic. 'And...since this matter is absolutely independent of logic, the latter can provide only the formal conditions of genuine cognition and cannot in its own self contain any real truth, nor even be the pathway

to real truth, because just that which is essential in truth, its content, lies outside logic' (SL, 28/44). Hegel characterizes the traditional understanding of logic as assuming that the material content of cognition is something 'absolutely independent of logic.' Kant and the tradition claim that logic itself is unable to bear any relation to truth other than a negative or formal condition. This is only to say that for any cognition to be determined as objectively true, it must not only be logically/formally valid but must in addition relate to a content outside itself to which it can be said to correspond. Yet Hegel's revision goes even farther, and denies to logic even the titles of 'pathway,' 'negative touchstone,' or 'outer courtyard.' For Hegel, logic is not even a propaedeutic to truth because it stays isolated within thought itself – there is no movement from within logic that of itself passes beyond logic. The entirety of the fifth paragraph amplifies this point:

Hitherto, the Notion of logic has rested on the separation, presupposed once and for all in the ordinary consciousness, of the content of cognition and its form, or of truth and certainty. First, it is assumed that the material of knowing is present on its own account as a ready-made world apart from thought, that thinking on its own is empty and comes as an external form to the said material, fills itself with it and only thus acquires a content and so becomes real knowing. (SL, 28/44)

Hegel here points to two assumptions that condition the determination of logic as outside of the province of truth. First, thought taken by itself is assumed to be empty, and secondly, the material world is said to be ready made beyond thought, yet there for our knowledge of it. It is only in the relation of the two that real knowing is possible. Real knowing is thus the result of the filling up of thought with a content external to it. On one side you have thought containing its own rules and form, and on the other side you have this ready-made world existing in itself. This is the epistemology implicit in the traditional conception of logic that Hegel believes has predetermined the way in which logic has conceived of its relation to truth. A passage from the seventh paragraph states something similar, yet emphasizes that the independence of thought from the material world is the result of the commitment to the conception of truth as correspondence:

the object is regarded as something complete and finished on its own account, something which can entirely dispense with thought for its actuality, while thought on the other hand is regarded as defective

because it has to complete itself with a material.... Truth is the agreement of thought with the object, and in order to bring about this agreement – for it does not exist on its own account – thinking is supposed to adapt and accommodate itself to the object. (SL, 28/44)

According to Hegel, the traditional conception of logic rests upon the assumptions of the correspondence theory of truth. The correspondence theory of truth assumes that the form (thought) and the content (object) exist independently of one another. Hegel's side comment ('for it does not exist on its own account') is interesting and reveals an additional assumption. He claims that the traditional view sees the agreement of thought and object as not existing on its own – thought and being are not intrinsically interdependent. The tradition assumes that for there to be truth, thought must conform to some already existing world, and that this conformity, or interdependence, is not 'always already' existing. The nonunity of thought and being is presupposed in the traditional conception of logic.

By noting these three assumptions in the traditional conception of logic and truth, Hegel provides us with clues as to what his reconstruction of logic will imply. These clues suggest that in Hegel's logic, (a) the object will not be understood as existing independently of thought, (b) thought will not be understood as lacking the content that establishes truth sufficiently, and (c) the existence of a criterion of truth other than the theory of correspondence will obtain. These three clues also must be thought in relation to the fruit of the labor of spirit over the last two millennia. On the basis of our previous work on the earlier Jena writings, we can suspect that truth is possible in Hegel's logic through the establishment of a content that is the *concrete* and *original* unity of thought and being.

(iii) *Method and standpoint*

The entire fourth paragraph of the introduction is devoted to the claim that what has been missing from the traditional understanding of logic is the recognition that the form of thinking is itself the material content proper to logic. This lack in the traditional conception of logic follows from a particular method of treating logic: 'The region of truth is not to be sought in that matter which is missing in logic, a deficiency to which the unsatisfactoriness of the science is usually attributed. The truth is rather that the insubstantial nature of the logical forms originates solely in the way in which they are considered and dealt with' (SL, 32/48). To 'deal with' something is to approach it in a certain way. The deficiencies of logic are a direct result of the method of dealing with thought that

governs the discipline of logic. 'If logic is supposed to lack a substantial content, then the fault does not lie with its subject matter but solely with the way in which the subject matter is grasped' (SL, 32/48). To approach something in a certain way is to grasp it or take it up. What is involved in the reconstruction of logic is thus not to point to the tradition that logic does really have a content; rather, first what must be grasped is the right way to approach the material. It begins to appear that through a transformation in method, the assumptions that have dominated the tradition begin to evaporate.

When the logical forms are taken as fixed determinations and consequently in their separation from each other and not as held together in an organic unity, then they are dead forms and the spirit which is their living, concrete unity does not dwell in them. As thus taken they lack a substantial content – a matter which would be substantial in itself. (SL, 32/48)

In this specific passage, Hegel claims that, because there is no concrete unity 'dwelling' in the independent logical forms of traditional logic, the living matter of thought as thought has remained 'outside' of it. Traditionally, logic treats the forms of thinking as separate forms whose definition or account does not immediately require reference to another. One term receives its account and then the account of the next is given – there is no organic unity that is developed through the process of the account of the moments in logic as a whole. There is no concrete unity that links together the different moments in logic in accordance with its own necessity. Logic traditionally lacked the idea. In Kant, the passage from the quantity of judgments to the quality seems mainly or even wholly oriented by an external architectonic motive. It is not the case that the logical determination of the quantity of judgment results in the necessity of the determination of the quality of judgments. The systematic structure of logic seems accidental or even external to the actual content. One can give an account of quantity without having to refer to quality – the exposition of the elements of logic does not seem to follow an intrinsic order. Because there is no internal connection or continuity at the level of content, only an imposed order coming from without is conceivable as ordering the articulation of logic as a whole.

The content which is missing in the logical forms is nothing else than a solid foundation and a concretion of these abstract determinations; and such a substantial being for them is usually sought outside

them. But logical reason itself is the substantial or real being which holds together within itself every abstract determination and is their substantial, absolutely concrete unity. One need not therefore look far for what is commonly called a matter... (SL, 32/48)

Instead of seeking the content and truth of thought outside logic, Hegel claims to recognize the indwelling unity of the forms of thought as the actual material content proper to logic. It is their systematic interconnection that is their content. The result is a transformation of method. In the above passage, it is reason that recognizes spirit coursing through the forms of thought. Thus the standpoint of reason is the effect on logic of the labor of spirit. It is the standpoint of reason that recognizes the idea as developed through what had traditionally been seen as the disparate elements of logic. It is the standpoint of reason that allows the method to unfold in a way that does justice to the organic unity of all thought.

In earlier analyses of Hegel's Jena writings, we saw that it is reason that Hegel identifies with the absolute standpoint. We saw that the cognition proper to reason has for its content the concrete and original unity of opposites. This recognition of the original unity of opposites is what Hegel praises in Kant's doctrine of the transcendental unity of apperception and the schematism. Yet Hegel also criticizes Kant's recognition of this original unity as limited, formal, and subjective. This parallels his criticism of Kant's conception of the epistemological status of the ideas of reason. The constitutive use of the ideas of reason cannot be determined as objectively true or false because they transcend the conditions of experience. The epistemological condition of the human standpoint is such that the ideas of the unconditioned cannot be determined as objectively true or false. For Hegel, Kant's limitation is also his merit: his critique of pure reason is praiseworthy, but his inability to re-envision reason from beyond the dogmatism-skepticism impasse is his limit. Kant's philosophy contains the germ of the authentic standpoint, but fails to give it a positive determination, or content. According to Hegel, the consistent development of the authentic standpoint restores to speculative reason the constitutive use that Kant had denied it, without falling back into the discourses of dogmatism or skepticism.

The best way to clarify the standpoint of the *Science of Logic* is to re-examine that out of which it emerges. 'The notion of pure science and its deduction is therefore presupposed in the present work in so far as the *Phenomenology of Spirit* is nothing other than the deduction of it' (SL, 33/49). The *Phenomenology* thus makes possible and justifies the standpoint of the *Science of Logic*. 'Thus pure science presupposes

liberation from the oppositions of consciousness. It contains *thought in so far as this is just as much the object in its own self, or the object in its own self in so far as it is equally pure thought*' (SL, 33/49). The standpoint of pure science, or of the absolute, is the result of the overcoming of the oppositions of consciousness. In the moment when the *Phenomenology* reaches its conclusion and the *Science of Logic* begins, the oppositions of consciousness are no longer the content of the dialectic. The dialectic in the *Science of Logic* unfolds as the immanence of the unconditioned in all content. The standpoint of pure science contains 'thought in so far as this is just as much the object in its own self, or the object in its own self in so far as it is equally pure thought' (SL, 34/49). This emphasizes how this standpoint differs from that of the *Phenomenology*: the content of the *Science of Logic* is the concrete unfolding of thought beyond the horizon of the oppositions of consciousness. Thus the *Phenomenology* justifies the actual instauration of a logic that has a content of its own. No longer is logic the mere outer courtyard or negative touchstone of truth; rather, logic becomes a moment in the unfolding of truth from out of itself. The method and assumptions of traditional logic are surpassed through the accomplishment of the *Phenomenology*. Through the labor of spirit, reason's constitutive use is restored. Accordingly, the *Phenomenology* is the specific overcoming of the Kantian philosophy since it is what makes possible what in Kant was impossible: the objective determination of reason itself. The entire project of the *Science of Logic*, its approach and accomplishment, represents from beginning to end the philosophy that has always already surpassed the limits of the critical philosophy – formal and subjective idealism.

The novelty of claiming that logic has content should not be underestimated. It is as much a departure from the tradition as is Hegel's claim that logic and metaphysics coincide. These two claims belong together: it is only through the recognition of a proper content for logic that logic is recognized as indistinguishable from metaphysics. Yet this coincidence is only possible by restoring a valid and objective content to reason. This objective content of constitutive reason, which is justified by the labor of the *Phenomenology*, is the result of the labor of spirit over the past two millennia. The standpoint of the *Science of Logic*, which transforms logic into the necessary and sufficient criterion of truth, is speculative reason as the pure science of the unfolding of the unconditioned.

(2) On either side of the judgment of reflection

Part one has shown that Hegel sees traditional conceptions of logic as inadequate because of their allegiance to certain assumptions and

methodological principles. These assumptions and methods that have determined the nature of logic for two millennia stem from a common standpoint. A new standpoint is assumed in the *Science of Logic*, which has as its consequence the coincidences of logic and metaphysics and truth and logic.

Part two will show the novelty of Hegel's account of formal logic. I will focus on Hegel's account of the judgment of reflection, or what is in Kant the quantitative judgment. To understand Hegel's judgment of reflection we must first understand its place in the *Science of Logic* as a whole.

First we can note that logic has multiple determinations within the text. It can be determined in a plurality of relations. For instance, from the standpoint of the *Science of Logic*, formal logic is both a result and a beginning. Hegel's treatment of the traditional content of logic is found in the second volume of the *Science of Logic*, the Doctrine of the Notion. It is the result of the first two books, being and essence. Thus it is most proximally the result of the Doctrine of Essence, and the reciprocal causal relations of substances. Looked at as a beginning, the treatment of formal logic is the notion in its immediacy giving way to objectivity. The movement of the notion through the different moments of logic passes beyond the subjective and becomes objectivity. Hegel's treatment of the traditional content of logic is the subjective notion, whose result is the succeeding moment of Objectivity (mechanism, chemism, teleology). Taken from either side, Hegel's account of the traditional forms of logic follows from the reciprocal causal relation of substances and results in the objectivity of the notion as mechanism.

The second way to understand the place of traditional logic in the *Science of Logic* is through the analysis of its dialectical movement. This dialectical movement is as both a ready-made three-step process and as contingent upon its object. In the *Encyclopedia Logic*, in discussing the Doctrine of the Notion, Hegel writes, 'The onward movement of the notion is no longer either a transition into, or a reflection on something else, but Development' (EL, 161/224). In the *Zusatz* to this paragraph, this statement is echoed: 'Transition into something else is the dialectical process within the range of Being; reflection (bringing something else into light), in the range of essence. The movement of the notion is development: 'by which that only is explicit which is already implicitly present'' (EL, 161/224). In the first passage from the *Encyclopedia*, the process as a whole concerns the movement 'onward' of the notion. This single movement takes different shapes relative to the specificities of its content. Dialectic in the Doctrine of Being is said to be the movement of transition into something else, and that of Essence is reflection through something else. The dialectical movement in which the treatment of

formal logic takes place is that of development, making explicit what is implicit.

Since every moment in the *Science of Logic* is adequately conceived only in relation to the whole, one must first approach Hegel's discussion of the traditional content of logic (concepts, judgments, syllogisms) in relation to what comes before it and what comes after. Each moment of the *Logic* flows from the preceding and flows into what follows. Now since the focus point of our analysis of Kant and Hegel's respective conceptions of logic is the quantitative judgment, we will have to approach logic and judgment from both sides. It is only thus that we can turn to an analysis of the judgment of reflection itself.

**(A) On either side of the subjective notion:
freedom and idea**

Hegel's discussion of the traditional logical doctrines (concept, judgment, and syllogism) takes up the first section of the third volume of the *Science of Logic*. Hegel also refers to the third book and the second volume as the subjective logic. This is the result of the two books of the Objective Logic, and more specifically the result of the second book of the first volume, the Doctrine of Essence. The subjective notion is the first of the three moments that make up the third book and the second volume. As the immediate, the subjective develops into the objective. If we adopt the general schema of dialectic we outlined above, the subjective notion is the immediate and simple cognition of the understanding; the second stage or the objective notion is the dialectical or negative stage in the Doctrine of the Notion; and the final section on the absolute Idea is the moment of positive reason or speculation. As the immediate, does this mean we should conceive of the traditional doctrines of logic as the stage of the understanding with its simple and abstract fixations? Since the standpoint in the *Science of Logic* implies that every moment in its progression is the expression of speculative reason, we cannot argue that the treatment of logic is 'merely' in accordance with the standards of the understanding. This follows if we recognize that the second volume represents the genesis of freedom beyond the causal reciprocity of substances. The whole of the second volume is said to be the development of freedom. The first stage in this development, the subjective notion, is thus freedom in its immediacy. It follows, then, that the objective notion is freedom in its negative or dialectical stage, and the absolute idea is where freedom finds its resting place. The standpoint of the *Science of Logic* is never the standpoint of the understanding. It is reason that permeates all the way through

the three moments of the dialectical process. Instead of characterizing, therefore, the first stage of the process as that of the understanding, there remains the option of emphasizing its 'immediacy.' It has already been noted that the stages include immediacy, mediacy, and positive reason/speculation. The third book of the *Science of Logic* also represents the moment of positive reason within the overall movement of the *Logic* as a whole. The subjective notion is the immediate stage of the Doctrine of the Notion, which is itself the third moment in the *Science of Logic's* three books. This only makes clear to us how any simple characterization along these lines is impossible. I cannot say that the stage of the third book of the *Science of Logic* is that of positive reason, nor can I say that it is exclusively the stage of immediacy or understanding. Such a determination would truly be at the level of the understanding. We must recognize that the advance beyond the standpoint of the understanding is there from the beginning through to the end of the *Science of Logic*. The adequate conception of any logical entity must be conceived on multiple registers, or levels of textual significance. But this general recognition of multiple determinations must not fail to delimit the particular nuances associated with its determination in each context. For instance, we must recognize the special significance that Hegel gives to the commencement of the third volume:

I have already mentioned in the Second Book of the Objective Logic that the philosophy which adopts the standpoint of substance and stops there is the system of Spinoza.... The only possible refutation of Spinoza must therefore consist in the first place, in recognizing its standpoint as essential and necessary and then going on to raise that standpoint to the higher one through its own immanent dialectic. The relationship of substance considered simply and solely in its own intrinsic nature leads on to its opposite, the Notion. The exposition of substance which leads onto the Notion is, therefore, the sole and genuine refutation of Spinoza. (SL, 12/580–1)

The commencement of the third volume of the *Science of Logic* is thus identified with the refutation of Spinoza. Where are we to locate this refutation within the whole? The discussion of substance takes up the entire third section of the Doctrine of Essence. As such, it is the stage of positive reason, while the first section, 'existence,' is the immediate, and 'appearance' would be the negative or dialectical stage. Yet the specific discussion of substance that constitutes the recognition of the necessity of transitioning out of essence to the notion is the third chapter

of the third section. As such, the first two chapters of the third part of the second book would indicate the immediate and dialectical stages respectively. The doctrine of the reciprocal causality of substances is the stage of positive reason that requires the development of the notion as freedom. 'The unity of substance is its relation of necessity; but this unity is only an inner necessity; in positing itself through the moment of absolute negativity it becomes a manifested or posited identity, and thereby becomes the freedom of the Notion.... With the Notion, therefore, we have entered the realm of freedom' (SL, 15/581–2). The transition from necessity to freedom is the genuine refutation of Spinoza. The beginning of the 'realm of freedom' represents philosophy beyond Spinoza. The refutation of Spinoza coincides with the beginning of Hegel's treatment of the traditional content of logic. How are we to understand a discussion of logic as the beginning of a philosophy beyond Spinoza? We must remember that Hegel's treatment of logic is not a traditional one. Formal logic in Hegel is just as much a moment of knowledge as is physics or geometry. 'The great vision of substance in Spinoza is only a potential liberation from the finite exclusiveness and egotism: but the notion itself realizes for its own both the power of necessity and actual freedom' (EL, 159/222). This can also be understood by reference to the passages we examined earlier, in which Hegel cites the probability that the labor of spirit for millennia perhaps has achieved a new perspective on the nature of its own form. Logic is not a propaedeutic to the life of mind; rather, it is a moment of mind itself. To give an account of the part is to situate it in terms of the whole. What this means is being able to understand a particular moment in terms of all that comes before it and all that comes after. We have already seen that the subjective notion arises as the result of the first two books, and most proximately as the result of the final moment of the Doctrine of Essence. We have also seen that it gives way to the objective notion, as the stage of negative reason in the dialectic of the Doctrine of the Notion. Now it is time to turn to an analysis of Hegel's treatment of judgment.

(B) On either side of judgment – concept and syllogism

The subjective notion is composed of three moments that constitute its content, and that correspond to what is traditionally conceived to be the content of logic – concepts, judgments, and inferences. These three elements become in Hegel three stages: the concept is the stage of immediacy, judgment the stage of negative reason, and syllogism the stage of positive reason.

As a moment within the exposition of the absolute idea, Hegel's discussion of logic follows from the completion of the Doctrine of Essence and is the beginning of the Doctrine of the Notion. The truth of concepts, judgments, and syllogisms is that their exposition is absolutely determined by what they stand as a result of and that in which they will result. As such, Hegel's view of logic is that an adequate account of its elements recognizes at once their necessity and their inadequacy. The progressive development of the Doctrine of the Notion reveals the inadequacy of logic as the exhaustive or ultimate determination of the notion. The movement of the Doctrine of the Notion develops from the immediate subjective notion (logic) into the mediate objective notion. Thus the adequate exposition of the forms of logic is only given when the inadequacy of logic is recognized. True, what follows from the treatment of logic is conditioned by it, but the objective notion is the more complete knowledge.

Thus the truth of logic is doubly determined: it is the result of something other than itself, and it results in something other than itself. But Hegel's account of logic does not merely determine the truth of logic by what is prior and posterior to it. Logic contains its own three-part speculative process. The subjective notion unfolds through the stages of immediacy (concepts), mediation (judgment), and speculation (syllogism). According to Hegel, we must see logic as a moment in a process, and as a process itself. To give an account of the place of the judgment in the unfolding of the subjective notion is the task of the following. To the extent we can accomplish this goal, we will be better able to understand the judgment of reflection itself.

(i) The place of judgment in the Doctrine of the Notion

In the third volume, the order and content of exposition correspond to the free and necessary development of the Notion out of itself, and we know that the dialectical process of the third volume can be characterized as development rather than transition and reflection. The process of concept-judgment-syllogism represents the unfolding of the first stage of the Doctrine of the Notion called the subjective notion. The discussion of the 'concept' thus represents the immediate stage in the unfolding of the subjective notion, which is itself the immediate stage in the unfolding of the notion. But it remains to focus our picture of Hegel's discussion of the traditional forms of judgment.

A brief note about vocabulary is necessary. In the following I will use the word 'notion' to represent the subject matter of the third volume as a whole, and use the word 'concept' to apply to the first section of

the subjective notion. Hegel uses *Begriff* to designate both the third book of the *Science of Logic* and the first section of the subjective notion. The 'notion' in its immediacy is the concept. This brings up the question, why Hegel did not name the third book the Doctrine of the Idea? My sense is that notion as used in the title of the second volume is in one way equivalent with idea, insofar as through the complete development of the notion, the notion as idea is realized. I think it is helpful, although potentially misleading, to preserve the distinction between notion, concept, and idea. By preserving this distinction we emphasize more clearly what the third section on the absolute idea truly represents. My sense is that this is the reason why A. V. Miller handles the translation as he does.

There is one sense in which Hegel's treatment of logic is not novel. He is consistent with tradition in beginning with concepts, going next to judgments, and then finally to syllogisms. He is also consistent with tradition in affirming that concepts form the basis of logic, judgment combines concepts, and syllogisms combine judgments. What makes Hegel's treatment of logic stand out is the fact that this movement through concept, judgment, and syllogism is not merely an external or even an empirical one. There is an internal and organic connection between these three parts – each part represents a moment of the single development of the notion. What is novel is that Hegel takes up the traditional content of logic from within the speculative process: the concept is the immediate, judgment is the mediating function of negative reason, and syllogism is positive reason. The movement through these three steps is that of development. The dialectical process ensures that each element is conceived within an organic unity that we saw earlier represents the standpoint of reason.

Logic thus represents the stage of immediacy within the Doctrine of the Notion. Since the process of the logic is the immanent deduction of the truth of the notion, logic is situated as the deductive precondition for what comes after it. Logic is for Hegel immanent in what follows from it, and the truth of the subjective notion is realized and preserved in flowing forth into objectivity. The entirely adequate conception of what is traditionally called logic is what leads into the immediate stage of the objective notion: mechanism. This reveals the necessity of the following questions: Is it a mistake to think of Hegel as critical of the conception of logic as the outer courtyard of science? Is he here not in fact situating logic as the precondition or even the 'cause' of the notion's becoming objective? I want to maintain an interpretation and understanding of Hegel that (a) recognizes logic as the immanent deductive precondition for 'objectivity,' or the objective determination

of the notion, but (b) distinguishes this from logic conceived as 'outer courtyard.' Logic is the precondition for the objective determination of the notion, but it is not the outer courtyard beyond which one ascends to real knowledge. It must be remembered that logic is as much the manifestation of truth as any other moment in the *Science of Logic*. The conception of logic as bearing within itself sufficient criteria of truth is the most radical or novel aspect of the *Science of Logic*. Yet perhaps in the actual carrying out of the *Science of Logic* Hegel was unable to separate his own treatment of logic from those that treat it as the outer courtyard. As we turn to a concrete analysis of the quantitative judgment, we ought to at least remain suspicious that Hegel ultimately falls back into a conception of logic as propaedeutic to 'objective' knowledge. This suspicion will at least keep us on the alert for the tension between these seemingly opposing commitments. Observance of this tension reveals an important connection between the fact that logic represents both the immediate and subjective determination of the notion and the fact that logic for the first time in history has content.

This recognition serves only to emphasize that the progression of the *Science of Logic* from one moment to another is not a mere sequence or series, but is multilayered. This is to say that the significance of each moment must be registered on multiple levels. The meaning of judgment would be determined by (1) its place in the exposition of the subjective notion, that is, as the mediate stage following the concept, and as leading up to the syllogism (2) its place as the immediate and subjective stage within the doctrine of the notion, as leading up to the objective notion, and (3) its place as the immediate stage in the third and final moment in the immanent deduction of the whole, and thus as freedom and the unity of thought and being in its immediacy.

Since we know that each moment in the *Science of Logic* has its own process, we should not expect the first part of the third volume, the subjective notion, to be any exception. We would expect there to be a stage of immediacy (concepts), mediateness (judgments), and positive reason (syllogism). In this expectation, we are not disappointed. Yet Hegel's discussion of judgment is an exception to the tripartite structure of the dialectic that dominates the rest of the text. Judgment is composed of four moments or kinds of judgments: existence, reflection, necessity, and notion. The dialectic of the judgment passes through four, and not three, moments in its development. How are we to understand this divergence from the apparent formula operative throughout the rest of the text?

One way this exceptional instance can be understood is by noting Hegel's 'ambivalent' relation to Kant and the table of judgments. Ambivalence indicates a relation in which two distinct and contrary positions are justly maintained by a subject toward an object. Hegel seems to respect Kant's accomplishments, while denying they are satisfactory or ultimate. Hegel approves to a certain extent of the four-part division of the table of judgments that Kant puts forward because it is derived from a common principle. Hegel departs, however, from Kant with regard to the nature and even the defining characteristics of these forms of judgment. It is this ambivalence that must be taken into account when trying to understand why in the treatment of judgment in particular, there are four moments, while in the rest of the text, the three-part process seems consistent. The second way to understand this four-part structure is by reference to the *Zusatz* to paragraph 171 of the *Encyclopedia Logic*. This is the only place in which I can find a direct explanation for the divergence. Hegel writes,

The various kinds of judgment are no empirical aggregate. They are a systematic whole bearing the stamp of thought, and it was one of Kant's great achievements that he first saw this. His proposed divisions, according to the headings of his table of categories into judgments of quality, quantity, relation, and modality, cannot be called satisfactory, partly from the merely formal application of the headings of these categories, partly on account of their content. Still it rests upon a true perception of the fact that the different species of judgment derive their features from the universal forms of the logical idea itself. If we follow this clue, it will supply us with the three kinds of judgment parallel to the stages of Being, Essence, and Notion. The second of these kinds as required by the character of Essence, which is the stage of differentiation must be doubled.

Here we see his ambivalence about Kant very clearly: Kant is to be praised for recognizing the fact that the table of categories and judgments can be and should be derived from a common source or ground. Yet Hegel feels criticism is due to Kant for (a) the formal way in which the table headings of the categories is applied to those of judgment and (b) the account of the judgments Kant actually gives. But the questions are, why are there four types of judgments and not three? Why must the judgment correspondent to essence be doubled? Why is the sphere of essence as the stage of differentiation necessary to double? I will return

to this problem both in the section on the reflective judgment itself, and in the conclusion to this chapter.

So although it is the result of the concept and thus a beginning, judgment is also the second or mediating moment in the exposition of the subjective notion. In its immediacy as a beginning it will unfold according to its own unique 'four'-part sequence. Now, I would like to turn directly to the relation from the concept to judgment, as representing one side by which we can approach Hegel's theory of judgment.

(ii) *From concept to judgment*

The discussion of the concept, as the immediate beginning of the subjective logic, and as thus the immediacy of the immediate, has three stages. First, the concept in its immediacy is considered as a simple universal: the recognition of the notion as immediate posits the simple identity of itself with universality. But secondly, as only one of many universal concepts, it is a particular concept standing over and against other concepts. It is no longer simple self-identity, but is rather a differentiated particular concept. Third, the concept is shown in its singularity as the concrete unity of its simple universality and its particularity. The singularity of the concept, as the concrete unity of $A=A$ and $A=-A$, passes into the mediate stage of the subjective notion, that is, judgment, where the singular concept divides itself.

In the first instance, it is the pure Notion or the determination of universality. But the pure or universal Notion is only a determinate or particular notion which takes its place alongside other notions.... Secondly the Notion is thereby posited as this particular or determinate Notion, distinct from others. Thirdly, individuality is the Notion reflecting itself out of the difference into absolute negativity. This is, at the same time, the moment in which it has passed out of its identity into its otherness, and becomes judgment. (SL, 32/600–1)

What Hegel here calls the 'absolute negativity' corresponds to the negation of the negativity involved in the concept's particularity. It is the second negation that negates the conflict or antithesis between the concept in its simple immediacy ($A=A$), and the negativity of the concept standing over and against other concepts ($A=-A$). In this passage what is especially evident is the way in which the third moment in the immanent dialectic of the concept is both an end and a beginning. It is only from the concept conceived of in its singularity that a true conception of the function of judgment is possible. A treatment of the concept

that does not recognize that every concept is singular cannot claim to have an adequate account of judgment.

Thus with regard to what is immediately prior to the discussion of judgment, we see the concept recognized in its singular unity of identity and difference. 'Thirdly individuality is the notion reflecting itself out of its difference from other notions into absolute negativity. This is, at the same time, the moment in which it has passed out of its identity into its otherness, and becomes judgment' (SL, 32/600–1). The individual, or singular, concept is the result of the movement of the concept through the moments of particularity and universality. The moment of the individuality of the concept is both the completion of the development of the concept and the becoming of judgment. And it is from this moment of the concept, its radical singularity, that the development beyond the concept and into judgment takes place.

The unfolding of the subjective notion in its immediacy as concept gives rise to the unfolding of judgment as the subjective notion in its second or dialectical stage. 'Judging is thus...the Notion as the determining of the Notion by itself, and the further progress of the judgment into the diversity of judgments is the progressive determination of the Notion' (SL, 53/623). Judging as such is the second moment in the subjective development of the notion; It is the stage of determination of the concept by itself. 'The Judgment is the notion in its particularity, as a connection which is also a distinguishing...' (EL, 166/230). Judgment is the becoming determinate or becoming differentiated of the singular concept. As such, judgment *is* the notion resulting from the concept, but it is not the notion in its immediate simplicity as concept. Judgment is the notion as having passed through the three stages of the concept. Judgment is the beyond of the individuality of the concept. The singular concept determinates itself in judgment, and the different kinds of judgment thus correspond to the progressive determination of the notion as singular concept. This becoming determinate is described by Hegel as the 'disruption of the notion.' Judgment explicates what is an implicit unity in concepts. This is why Hegel speaks of judgment as original division – it is the determination or differentiation of the singular concept that arises out of the singular concept itself. Judgment is the particularization of the singular concept by negating its abstract simplicity. It divides this simple unity into subject and predicate. It determines itself as the unity of subject and predicate, and negates the empty identity of $A=A$ and $A=-A$. It leaves the truth of the concept behind and becomes the judgment in its immediacy.

(iii) *From judgment to syllogism*

The notion in its immediacy is the subjective notion. The immediate stage of the subjective notion is the concept. The unfolding of the concept is the simple but progressive determination of the subjective notion as universal, particular, and singular. The judgment is the self-determination or self-division of the singular concept that moves through four phases. The syllogism represents the third step in the development of the subjective notion, and thus the last stage in the immediacy of the doctrine of the notion as a whole. The development of the subjective notion in judgment results in the recognition of the necessity of the syllogism. The syllogism is determined as the notion returning to unity with itself after self-dividing in judgment. 'The actual is one; but it is also the divergence from each other of the constituent elements of the notion; and the Syllogism represents the orbit of intermediation of its elements, by which it realizes its unity' (EL, 181/244–5). Judgment explicates the constituent elements of the notion as a singular concept. The syllogism brings the notion back into a unity with itself. First, it determines the notion as the unity of the elements explicit in multiple judgments. Secondly, it allows the simple determination of the notion in the concept and the self-externalization of the singular concept in judgment to be thought in their unity as the unity of the notion.

We have found the syllogism to be the restoration of the notion in the judgment, and consequently the unity and truth of both. The Notion as such holds its moments sublated in unity; in the judgment this unity is internal or, what is the same thing, external; and the moments, although related, are posited as self-subsistent extremes. In the syllogism the Notion determinations are like the extremes of the judgment, and at the same time their determinate unity is posted. Thus the syllogism is the completely posited Notion. (SL, 90/664)

In the syllogism, the subjective notion, having passed through its immediate stage as concept, and having passed through its stage of differentiation/alienation in judgment, is now fully determinate as unity of a multiplicity. From the side of the syllogism, judgment represents the explication of what is implicit in the singular concept. Judgment as explication is a negation because it negates the simple universality of the concept. Judgment is the self-alienation of the singular concept. The subject and the predicate in the judgment are together the concept, but the unity of these extremes remains implicit or presupposed – the

original unity is not explicated. In other words, what remains implicit is the function of the copula. This is why Hegel repeatedly speaks of the impregnation of the copula as that which propels the notion beyond judgment into syllogism. 'Through the impregnation of the copula the judgment has become the syllogism' (SL, 89/663). The syllogism represents the conclusion of the subjective notion and the transition to the objective. The determinate difference of the judgment and the syllogism is that through the syllogism the copula of the judgment becomes explicit in the syllogism as the middle term: 'The essential feature of the syllogism is the unity of the extremes, the middle term which unites them, and the ground which supports them' (SL, 91/665). The essential feature is that the notion as the unity of terms becomes explicit in the syllogism and as such represents the full self-determination of the notion in its immediate or subjective stage. It is now the self-determination of the notion that recognizes its identity in a multiplicity of determinations. The distinctive feature is not an increase in the number of judgments determining the notion. It is not that now there are many judgments that together determine the notion; rather, it is the recognition of the 'conceptual' unity concretely determinate in the relation of a multitude of judgments. It is the function of the middle term as making explicit the relation and thus determining the subjective notion completely that is the distinctive or essential feature of the syllogism. The impregnation of the copula is the middle term of the syllogism. 'It is only thus that reason rises above the finite, conditioned, sensuous, call it what you will, and in this negativity is essentially pregnant with content, for it is the unity of determinate extremes; as such, however, the rational is nothing but the syllogism' (SL, 91/665). The emergence of the syllogism out of judgment represents the coming to be of reason as actual and for itself. The final stage of the subjective notion is the determination of the unity of thought and being, of reason and actuality as syllogism. In the quote above from the *Encyclopedia Logic*, the syllogism represents the *intermediation* of the elements of which judgment was the explication. But as intermediation the syllogism makes explicit the unity of the elements that in judgment is only implicit.

Let us look a little more closely at a quotation cited earlier: 'The essential feature of the syllogism is the unity of the extremes, the middle term which unites them, and the ground which supports them' (SL, 91/665). We should think that the middle term, as the 'ground which supports them, is what unifies the judgments or notion determinations.' It would be the middle term that is the fully developed subjective notion. We can also think that it is the subjective notion as a whole that is the ground

that supports the unity of the different notion determinations. The syllogism is the final stage in the movement of the subjective notion, so the subjective notion permeates all of the stages. Or we can interpret it as suggesting that it is reason that unites all the determinations. In fact these three alternatives are ultimately identical. The syllogism is the completely determined notion through the distinctive feature of the middle term. The completely determined notion is one that is able to articulate itself as the unity of a multiplicity of determinations of a singular concept. The singular concept comes to constitute itself in syllogism as a unity that presides over a multiplicity of self-explications. This is the subjective notion.

The adequate development of the subjective notion is completed through the recognition of the notion's concrete determination of itself as the mediating ground of its elements. Judgment from the standpoint of the syllogism is an inadequate determination of the notion because it is unable to make explicit the fact that it is the notion that is the ground for the unity of subject and predicate. Judgment is also inadequate because it can only think the determining of the notion as an isolated self-division. Although it is an articulation of the notion by the notion, it is still abstract because it can only think the notion through the two elements, subject and predicate. This seems to be the essential deficiency of judgment that syllogism is by nature driven to overcome: the judgment lacks the explication of the unity of the relation. This relation becomes explicit in syllogism, but only in the same moment in which the unity is complex – it is no longer the unity of subject and predicate, but now it is the unity of multiple self-divisions. For the unity to be posited, the relation it establishes must be developed further. The concept now at the end of its immediacy is the recognized unity of its own activity through multiple determinations.

(iv) Judgment: from either side

By looking at judgment from both sides we can see that it is intrinsically connected with the moments that come after and before it. On Hegel's view, an adequate treatment of judgment must recognize how it emerges from the concept in its singularity and gives rise to the syllogism as the completion of the movement of the subjective notion. Judgment arises out of the need for the notion to go beyond its immediate and simple determination of itself into the stage of mediation or negative reason. Also equally essential to the adequate conception of judgment is how it reveals the necessity of an explication of the notion as the unity of a multiplicity of judgments. The adequate conception of judgment thus

recognizes the judgment as inadequate as a determination of the subjective notion. If the terminal point of the subjective notion is the determinate unity of the rational and the actual, it is this unity that marks the necessity that the treatment of logic bears within itself. Logic can only be conceived adequately when it is recognized as an inadequate determination of the notion. The discussion of judgment itself is best read as contained within this process beyond the subjective determinateness of the notion. But we should hesitate in assuming that Hegel still conceives of the traditional content of logic as a propaedeutic to objective science, if not merely for the fact that we no longer can characterize logic as needing something outside of itself to have a sufficient relation to truth.

(C) On either side of the judgment of reflection

We have seen the place of judgment in the unfolding of the subjective notion. The section on judgment corresponds to the stage of mediation or negative reason in the Doctrine of the Notion. Judgment represents the determination of the subjective notion as other than itself (SL, 32/600) or as going outside of its immediacy. Judgment is thus the mediation of the concept by itself as the second stage in the development of the subjective notion. Now we must take up the problem of giving an account of what lies on either side of the judgment of reflection.

The progressive exposition of judgment is the movement through the following judgment types: quality, reflection, necessity, and notion. The judgment of the notion represents the terminal point of the unfolding of judgment. The development of the subjective notion moves beyond judgment to syllogism. It is the reflective judgment that we will be focusing on since its moments correspond to the quantitative judgment in Kant (that is, universal, particular, and singular). Hegel uses 'allness,' I believe, to distinguish it from the universality that starts the dialectic of the concept.

The following analysis looks at reflective judgment from either side. It thus first examines the way in which the reflective judgment follows from the judgment of existence, and then examines the judgment of necessity as that which emerges as the development of the subjective notion out of the judgment of reflection.

(i) *Qualitative judgment*

The first moment in the four-part development of judgment is qualitative judgment. The qualitative judgment comes before the judgment of reflection. Thus, the judgment of reflection is the development out

of the qualitative judgment. Hegel's account of qualitative judgment is in the following order: positive, negative, infinite. As the first moment of judgment, it is the immediate result of the termination of the development of the concept in the singularity of the concept. The qualitative judgment is the first moment of the determination of the singular concept. The positive judgment is also the initial moment of the development beyond the immediacy of the subjective notion. The qualitative judgment is also referred to as the judgment of inherence. The singular concept is determined as having the universal inherent in itself. Hegel's example is 'the rose is red.' It is not that the subject inheres in the class of things that are red. We should understand this judgment as positing that redness inheres in the subject. It is this determination that represents the first self-explication of the concept.

The content of qualitative judgment is empirical. The predicate inheres in an empirical subject. Traditionally, the qualitative determination of a judgment could be evaluated within any judgment. The judgment 'mediums are seldom transparent' can be evaluated as to its quality even though it does not have an empirical subject. Kant's metaphysical deduction claims that every judgment has a determination within each of the four headings. As such, any judgment has a qualitative, quantitative, relational, and modal aspect. To give an adequate account of a judgment is thus to grasp it as having all four determinations. For Hegel, the qualitative nature of judgment is most prominent in certain kinds of content. Again, the novelty of Hegel's claim is that the different kinds of judgment are distinguished by their content. As such, the categorical judgment 'all men are mortal' is not a qualitative judgment. This is not to suggest that it does not have a positive character. Hegel's view is that the moments that follow after the qualitative judgment are developments of it. The difference is that what is prominent in the qualitative judgment recedes into the background in the becoming of the judgment of reflection. In contrast to Kant, for Hegel the determination of the logical nature of a specific judgment is to recognize it as one of four types. Such recognition would require philosophical analysis of the judgment. Hegel intends the unfolding development of judgment in the *Science of Logic* to provide the template for such an analysis.

The expositional process of qualitative judgment begins with the positive judgment, moves next to the negative judgment, and is completed with the infinite judgment. The process of the qualitative judgment begins with the immediate inherence of the universal in the individual. The positive judgment makes explicit that the subject is something that has a quality. This quality is empirical and inheres in the empirical individual.

In judgment, the singular concept is at first the inherence of a quality in an empirical subject. The negative judgment negates the inherence of the universal in the subject: 'this rose is not red.' It is a determination of the subject as not a specific quality. 'It negates the determinateness of the predicate of the positive judgment...' (SL, 68/641). The negative judgment results in the separation of subject and predicate. This separation is more completely accomplished in the infinite judgment. 'The negative judgment contained a universality more purged of limitation than the positive judgment, and for that reason must be all the more negated of the subject as an individual. In this manner, the whole extent of the predicate is negated and there is no longer any positive relation between it and the subject. This is the infinite judgment' (SL, 69/641). The separation in the negative judgment still maintains the connection of the empirical subject with a quality, only not the particular quality explicit in the judgment. In the *Encyclopedia Logic*, Hegel writes, 'To say that the rose is not red, implies that it is still colored – in the first place with another color; which however would be only one more positive judgment' (EL, 173/237–8). The individual still has a quality of the same sort as the one negated in the negative judgment. The rose could be pink, white, and so on. The inherence of a quality of a specific kind is still implied in the negative judgment. Yet the quality that inheres in the subject is indeterminate. The indeterminacy is the result of the negation of the inherence of the universal in the subject. The negation does not imply the absence of a universal inhering in the subject. On the contrary, implicit in the negative judgment is the claim that there is a positive judgment adequate to the empirical individual. The negation of the negative judgment is not absolute. This is the function that the infinite judgment fulfills. The infinite judgment is the complete negation of the adequacy of the abstract universal as a determination of the subject. Hegel divides the infinite judgment into two moments. The first is positive and indicates that the individual is individual. In its determination in judgment, the singular concept is in immediate identity with itself in not being the universal. Hegel remarks that this is not even a judgment because there is no concrete content – the self-dividing of the singular concept in judgment seems to come to nothing (SL, 70/642). The positive content of the infinite judgment is that the individual is individual and as such results in tautology. The subject's not being the universal is the most prominent determination of the infinite judgment. It is distinct from the negative judgment because the negative judgment for Hegel still establishes a relation between the singular and the universal. The second moment in the infinite judgment is the negative. The infinite judgment is an act of pure repulsion of the singular

concept from the universal: 'the subject and predicate have no positive relation whatever to each other' (SL, 70/643) or 'the total incompatibility of the subject and predicate' (EL, 173/238). This absolute separation of predicate from the subject is therefore radically distinct from the negative judgment, since the negative judgment still implicitly posits the inherence of some universal in the subject. It is for Hegel the negative infinite judgment that represents the determination of the concept that springs the dialectic beyond the judgment of inherence to the judgment of reflection. The negative infinite judgment 'exhibits the proximate result of the dialectical process in the immediate judgments preceding and distinctly displays their finitude and untruth' (EL, 173/238). The terminus point of the judgment of inherence is the noncoincidence of subject and predicate, as the ultimate 'nontruth' of both the positive and the negative judgments. The step beyond the judgment of inherence, the judgment of reflection, must be seen as what follows from the recognition of the individual and the universal in empirical judgments as not actually being in relation. Thus the judgment of reflection is most proximally the development of the negative infinite judgment.

(ii) *Judgment of necessity*

What comes after the judgment of reflection is the judgment of necessity. The judgment of necessity is that which emerges from the development of the judgment of reflection. The *Encyclopedia Logic* paragraph 177 describes the judgment of necessity as determining the substantial nature of the subject. Universality becomes determinate in the subject in the judgment of necessity. This determinate universality is the prominent issue in the judgment of necessity. Because of the necessary relation, it can be said that the notion determination is finally liberated from the empirical. As we will see, the judgment of reflection is still anchored to the empirical.

Hegel claims that without this anchoring, the judgment of inherence and reflection would be impossible. The third stage in the development of judgment can be seen as both the logical precondition and the result of the two prior stages. The exposition of the judgment of necessity progresses from categorical to hypothetical to disjunctive judgments. The development of the judgment of necessity is the development of the *relation* of subject and predicate. The judgment of necessity culminates in the transition to the judgment of the notion, which in turn is the transition to the syllogism. The specific content of the judgment of necessity is genus and species. 'The genus essentially sunders itself, or repels itself into species; it is genus only insofar as it comprehends species under itself;

the species is species insofar as on the one hand it exists in the individuals, and on the other hand is in the genus a higher universality. Now the categorical judgment is the first or immediate judgment of necessity...' (SL, 77–8/650–1). If that which begins the judgment of necessity is the result of the judgment of reflection, we can assume that out of the judgment of reflection emerges the subjective notion as genus and species. The *Zusatz* to paragraph 177 of the *Encyclopedia Logic* makes clear what is essential:

It betrays a defective logical training to place upon the same level judgments like 'gold is dear' and judgments like 'gold is metal.' That 'gold is dear' is a matter of external connection between it and our wants or inclinations, the costs of obtaining it, and other circumstances. Metallity, on the contrary, constitutes the substantial nature of gold, apart from which it and all else that is in it, or can be predicated of it, would be unable to subsist. (EL, 177/242)

Here we have an example both of a judgment of necessity and a judgment of reflection. The judgment of reflection takes 'gold' as its subject and 'things that are dear' as its predicate. We will see later that the predicate in the judgment of reflection indicates the relation of subject and predicate to something else not included in the judgment. As such, the judgment of reflection is a determination that is not essential to the subject. The judgment of necessity that follows after the judgment of reflection makes determinate precisely a necessary connection between subject and predicate.

It is important to note how the necessary judgment makes possible the judgment of inherence and reflection. It may seem strange to say that what comes after the judgments of inherence and reflection makes them possible. It would seem to suggest that there is a retroactive function at play in Hegel's exposition of judgment. This retroactive function is simply the explication of the assumptions made in the earlier forms of judgment. Let us look again at the quotation cited above: 'Metallity constitutes the substantial nature of gold, apart from which it, and all else that is in it, or can be predicated of it...' By 'all that is in it,' I believe Hegel to mean the judgment of inherence: 'The gold is yellow.' It is not as clear that by 'all that can be predicated of it' Hegel means judgments of reflection. It is safest to maintain that the 'or' that links the two determinations ('all that is in it, or all that can be predicated of it') implies that all judgments find a ground in this judgment. But this would make it difficult to understand how the final form of judgment, the judgment

of the notion, is the truth of the judgment of necessity. The judgment of the notion would thus be the truth of and the result of the judgments of inherence, reflection, and necessity. Thus the retroactive function proper to the judgment of necessity is its capacity to determine the ground for the possibility of the subject's having qualities, and as we will see, relations with other empirical individuals. The content of the judgment of necessity makes possible the empirical determinations of subjects. It is the beginning of objective universality (SL, 84/657) at the same time as it is the result of the inadequacies of empirical determinations in the judgment form preceding it. The judgment of necessity is the truth of the prior two judgments and is the undeveloped form of the judgment of the notion.

I will speak more about the judgment of necessity in the analysis of the judgment of reflection. For the purposes of this section, it is enough to have noted the way in which what follows from the judgment of reflection is the determination of genus and species. This determination is the essential and intrinsic relation of subject and predicate. The judgment of reflection deals only with the external relation of subject and predicate. The judgment of necessity is the substantial relation of the subject and predicate. The notion passes beyond the judgment of reflection when it becomes determined as necessary and substantial.

On one side of the judgment of reflection there is the judgment of inherence. The subject of such a judgment is in the infinite judgment determined as not the abstract and empirical universal represented in the predicate. The truth of the judgment of existence is that it is no judgment at all (SL, 70/642). On the other side, the judgment of necessity reveals the subject and predicate in a substantial and internal unity. The result of the judgment of reflection is the judgment of necessity, and specifically the categorical judgment. Based on this analysis we now have the following clues as to the nature of the judgment of reflection itself: (1) the judgment of reflection establishes a concrete determination of the singular concept because it is a more developed judgment than the judgment of existence, (2) the judgment of reflection does not establish an internal relation between subject and predicate, since it is this internal relation that emerges in the judgment of necessity.

Part two of this chapter has tried to provide an analysis of the place of the judgment of reflection in the *Science of Logic* as a whole. Hegel's treatment of logic is the immediate stage of the Subjective Logic: the subjective notion. The Subjective Logic is the result of the Objective Logic, that is, the doctrines of being and essence. As the immediate stage in the Subjective Logic, the treatment of logic is surpassed by the mediate stage:

the notion in its objectivity. The subjective notion unfolds through the movement from concept, to judgment, to syllogism. We have seen the way in which the development takes place from concept to judgment and from judgment to syllogism. And we have seen how the judgment of existence leads into the judgment of reflection, which in turn leads into the judgment of necessity. It remains to look at the nature of the judgment of reflection itself.

(3) The judgment of reflection

The preceding contextual analysis provides guidelines for the interpretation of Hegel's direct treatment of the judgment of reflection. I will supplement these guidelines with the following analysis of the introduction to reflective judgment. In tandem, they will provide us a framework to develop our interpretation of the reflective judgment in itself. It is this interpretation that we will use to compare with Kant's.

(A) Introduction

(i) Five introductory points

There are five points made in the introduction to the judgment of reflection that characterize it directly. The first is that the predicate is not an abstract single property. It 'is posited as a universal that has gathered itself together into a unity through the relation of distinct terms...' (SL, 71/643). The predicate is explicitly posited as universal. The inadequacy of the universal to the singular, as the result of the judgment of existence, is included within the judgment of reflection – that is, it is posited. But the additional characteristic is that this posited universality 'gathers itself together.' The universality of the predicate is also described as 'the taking together of various properties and existences.' It is starting from the individuals that the universal develops and is determined in judgment. The individuals gathered together under the predicate are the same insofar as they are the expressions of the universal. Hegel will characterize this as an external combination of many individuals. Although it is progress in comparison to the abstract predicate of the judgment of existence, the judgment of reflection does not go beyond an empirical starting point. Its claim to universality is spurious, a hoax. It is only the judgment of necessity that secures for the notion a general universality.

The second major point is that with the judgment of reflection, 'we first have, strictly speaking, a determinate content' (SL, 71/643). The determinate content of the judgment of reflection is contrasted with the judgment of existence on this point. The judgment of reflection

situates the predicate as implying the relatedness of the subject to something other than itself. There is a relation that is determinate in the judgment of reflection, while in the judgment of existence there is not. The determinate content is thus the relation. To say that something is useful is different on Hegel's account from saying that something is red. 'The following may therefore serve as examples of judgments of reflection: man is mortal, things are perishable, this thing is useful, harmful, hardness, elasticity of bodies, happiness, etc. are predicates of this peculiar kind. They express an essential determination, but one which is in a relationship or is a unifying universality' (SL, 71/643). What is thematic in the judgment of reflection is the relationship of the subject to things other than itself. The same point is made in both the 1831 *Lectures on Logic* and the 1817 version of the *Encyclopedia*. 'Despite the fact that some singular thing is merely something singular, it stands connected...with an external world. Everything that exists is relative. As something existent, such a singular thing stands within a relation. "Useful," "dangerous," are such universal predicates' (LL, 174/187). 'In the existent world the subject ceases to be immediately qualitative, it comes to be in relation and inter-connection with an other thing – with an external world. In this way the universality of the predicate comes to signify this relativity – (e.g. useful, or dangerous: a weight or an acid; or again, an instinct; are examples of such relativity)' (EL, 174/239). The main point is that the predicate in the judgment of reflection establishes the subject as in a world and in an essential relation to that world. The subject is determined insofar as it is related to others of a similar kind.

In the discussion of this point in the *Science of Logic*, Hegel is careful to note that this universality is not the universality of the notion fully realized, or even the judgment of necessity, but rather is an anticipatory expression of this kind of universality still mired, however, in the empirical. 'The Notion determines the existent, in the first instance, to determinations of relation, to self-continuities in the diverse multiplicity of concrete existence – yet in such a manner that the genuine universal... is still in the sphere of appearance' (SL, 71/644). The first determinate content of the singular concept in judgment is the determination of the subject as essentially related to others of the same kind. But what they all share in common is an essential and empirical relation to something other than themselves. This is echoed in the *Zusatz* to paragraph 174 of the *Encyclopedia Logic*:

If we pronounce the judgment, 'This plant is wholesome,' we regard the subject, plant, as standing in connection with something else

(the sickness which it cures), by means of its predicate (its wholesomeness). The case is the same with judgments like: this body is elastic...they all exhibit an advance beyond the immediate individuality of the subject, but none of them goes as far as to indicate the adequate notion of it. It is in this mode of judgment that the popular forms of reasoning delight.

As the determination of an existing multiplicity, the judgment of reflection goes beyond the judgment of existence. It is limited in that the universal is only posited as an external relating of the subject to others – it does not yet determine the notion in its adequacy. The subject is essentially related to the universal but only because of an external relationship to something other than itself. It is only in the judgment of necessity that the internal connection between the singular subject and other things will be internal and necessary – that is not empirical.

The reflective judgment is the first stage of the concrete determination of the notion through the relatedness of the subject to a world through the predicate. Hegel identifies the judgment of reflection with the delight of popular reasoning, which emphasizes why he conceives this judgment as inadequate. Popular reasoning seems to get caught up in the judgment of reflection – not recognizing the necessity of going beyond it. It is a moment in a process, and not the ‘terminal’ realization of the notion itself.

In another important passage from the introduction, Hegel clarifies why he has not called the judgment of reflection the quantitative judgment. Hegel’s justification is at best complex, brief, and problematic. He suggests that ‘just as quality is the most external immediacy, so is quantity, in the same way, the most external determination belonging to mediation’ (SL, 72/644). I will show later why he refers to the judgment of reflection as mediation. According to Hegel, quantity is the least defining characteristic of the judgment of reflection. The essential part of the judgment corresponds to the empirical and external relation expressed in it. In contrast to the judgment of existence, it is the relational element that is essential. The above quotation implies that both quality and quantity are the most external determinations of the respective judgment types. Yet Hegel’s exposition of the judgment of existence seems to refer to it quite frequently as the qualitative judgment. Nowhere in his exposition of the judgment of reflection does he refer to it as quantitative. Why is Hegel more comfortable talking about the judgment of existence as qualitative than he is talking about the judgment of reflection as quantitative? The *Encyclopedia Logic* and the *Lectures*

on Logic do not offer us any additional clues on this problematic point. Just as in Kant's treatment of quantitative judgment, Hegel's treatment of the judgment of reflection talks about the quantifiers 'this,' 'some,' and 'all.' The dialectical movement through the judgment of reflection is the movement through these three determinations. For now we must content ourselves with understanding these three determinations as the most external characteristics of the judgment.

The fourth point is that the dialectical unfolding of the reflective judgment is a movement discernable in the subject. In the judgment of existence the movement was discerned in the predicate, while in the judgment of necessity the movement is located in the relation itself. 'In the judgment of reflection the onward movement of determining runs its course in the subject, because this judgment has for its determination the reflected-in-itself' (SL, 72/644). The dialectical unfolding of the judgment of reflection is the progressive determination of the result of the judgment of existence. The judgment of existence results in the absolute noncoincidence of the subject and predicate. This is the result of the negative infinite judgment. Through the noncoincidence, the judgment of existence shows itself to be inadequate as a self-determination of the singular concept. The starting point, then, of the judgment of reflection is the subject reflected into itself, hence as not the universal. This precisely becomes determinate in the judgment of reflection. The relation posited in the predicate of the judgment of reflection situates the subject of the judgment as in relation to other subjects of a similar kind. The progressive development of the judgment of reflection moves from a 'this' to 'some' and then to 'all.' The relational predicate stays the same, while the subject term changes. 'Here therefore the essential element is the universal or predicate; hence it constitutes the basis by which, and in accordance with which, the subject is to be measured and determined' (SL, 72/644). The predicate is the ground or constant through which the subject term receives alternative determinations. The subject is what changes in the movement through the specific moments of the judgment of reflection. The quantifiers each represent a specific determination of the subject term. If this is the case, we are still left to wonder why Hegel refuses to call this judgment the quantitative judgment.

The fifth point will help clarify to a certain extent why the judgment of reflection is not called the quantitative judgment. We have already seen that the content of the judgment of reflection is the relation of the subject term to something other than itself. This fifth point indicates that the form of the judgment is that of subsumption. 'If the judgments of

existence may also be defined as judgments of inherence, judgments of reflection are, on the contrary, judgments of subsumption' (SL, 72/645). The quantitative judgment is such because in it the extent of a subject class is subsumed under a predicate. Different quantifiers distinguish the extent of a class of subjects that is subsumed under a predicate. The predicate's role in this subsumption is clear: 'it is the implicit being under which the individual is subsumed as an accidental' (SL, 72/645). The subject term is the inessential and the predicate as ground is the essential. If we take Hegel's examples as starting points, it is easy to discern his difference from Kant. The essential difference is not subsumption, since Kant also highlights this as determinate in the quantitative judgment. It is the content of the judgment that is the basic difference. For Kant, the content of the judgment is outside of the purview of logic's discourse. All that logic can teach us is the form of the judgment. Hegel in contrast emphasizes that there is a particular content that distinguishes the judgment of reflection from all other judgment types. So although Kant and Hegel both recognize the judgment as subsumptive, Hegel's treatment of subsumption is oriented fundamentally to a particular content. Just like Hegel's brief discussion of why judgments of reflection are not called quantitative judgments, this idea of subsumption and its pairing with the judgment of reflection is not mentioned in the *Encyclopedia*, or in the *Lectures on Logic*. This does not mean, however, that these comments are auxiliary or extraneous. But it does warn us to recognize that for Hegel what is truly original in the judgment of reflection is the fact that the subject of the judgment is related through the predicate to other existing subjects in a shared world.

(ii) *Four types of judgment?*

Hegel's treatment of judgment is genuinely perplexing. It contains four moments: the judgment of existence (affirmative, negative, infinite), the judgment of reflection (singular, particular, 'allness'), the judgment of necessity (categorical, hypothetical, disjunctive), and the judgment of the notion (assertoric, problematic, apodictic). With one exception, every other moment in the *Science of Logic* is made up of three moments. The *Science of Logic* is divided into Objective Logic, which contains the doctrine of being and essence, and Subjective Logic, which contains the doctrine of the notion.

Judgment has four moments. Hegel's exposition of the logical types of judgment is on this point identical with Kant's. Externally, the titles of the four judgment types and the order of their exposition differ. Quality precedes quantity in Hegel, whereas in Kant quantity comes first. As

already mentioned, Hegel nowhere to my knowledge explicitly justifies this specific divergence from Kant. Hegel perhaps assumes that the reader of the *Science of Logic* already is aware of the necessary primacy of quality. It is Johann Gottlieb Fichte's 1794–5 work *Foundations for the Entire Wissenschaftslehre* that posits quality as the primary of the categories. Along similar lines, perhaps one plausible explanation of why there are four moments of judgment is that for Hegel, Kant's table of judgments is correct. There are four judgment types. But now in the *Science of Logic*, the fact that there are four judgment types is justified as an expression of the absolute. Earlier we highlighted the fact that this four-part division of judgment could be accounted for through Hegel's ambivalent relation to Kant's table of judgments. But let us see the justification Hegel does provide for the fourfold division of judgment.

We have already seen Hegel refer to the judgment of existence and judgment of reflection as immediate and mediate judgments. This seems coherent with the dialectical process in general: immediacy, mediation or negative reason, and then positive reason. But then how ought we to understand the judgment of necessity and the judgment of the notion? As we will see, for Hegel the judgment of reflection and the judgment of necessity both constitute the mediate stage of negative reason, and the judgment of the notion is identified with the stage of positive reason. Yet it is hard to find Hegel explicitly justify the four types of judgment. There is no mention of this issue in the discussion of judgment itself. No mention of it is made in the introductory material at the beginning of the Objective Logic or the Subjective Logic. There is no direct account of why judgment has four moments provided within the *Science of Logic*. There is no discussion of it anywhere in the *Lectures on Logic*, or the *Encyclopedia* proper. The only place such a justification shows up is in the *Zusatz* to *Encyclopedia* paragraph 171: 'If we follow this clue, it will supply us with the three kinds of judgment parallel to the stages of Being, Essence, and Notion. The second of these kinds as required by the character of Essence, which is the stage of differentiation must be doubled.' Hegel claims that the judgment of reflection and the judgment of necessity correspond to determinations proper to 'essence.' This claim is based on the assertion that the structure of thought that is worked out in the Doctrine of Essence is relation. By 'relation' he intends us to understand a correlative structure – in which one thing cannot be adequately conceived without reference to another, for example, the conceptual pairs odd/even, light/dark. This interpretation is also the basis of those commentators who actually attempt to think through this problem, such as John McTaggart and John Burbidge. This is coherent

with what Hegel says about the judgment of reflection in the introduction. Certainly for something to be thought of as useful, what is also intended in the judgment is that for whom it is useful. The predicate 'wholesome' not only implies what is wholesome but also implies one or more individuals for whom it is wholesome. The subject (s) is determined as something (p) in the context of it being such (p) for something else (x). The coffee cup (s) is useful (p) for me (x). The coffee cup is not useful in itself; it receives this determination through its relatedness to something other than itself. The relation to something external to itself is that in virtue of which the coffee cup receives its predicate. Hegel's affirmation in the *Zusatz* that the judgment of reflection is dominated by the correlative function is not inconsistent with what he says in the *Science of Logic*. The judgment of necessity also expresses this 'correlativity' via the terms of species and genus. One cannot conceive of one adequately without reference to the other. We indicated above that the judgment of reflection posits an external relation between the subject and something other than itself, and that the judgment of necessity posits an internal relation. The judgment of necessity involves correlative terms that are internally related to one another, while the judgment of reflection involves correlative terms that are externally related. This would imply that the two moments of judgment that correspond to essence are respectively external and internal correlation. The dialectical movement would thus be from external to internal connection. This makes the most of Hegel's, at best, brief remark. The four moments of judgment remain one of the most perplexing issues with regard to Hegel's exposition of logic.

(B) The dialectical movement of the judgment of reflection

The judgment of reflection begins with singularity as the result of the judgment of existence. The judgment of existence revealed itself 'as not a judgment at all.' The immediate stage of the judgment of reflection begins with the singular concept reflected into itself as not abstract universality.

(i) Singularity in relation

The dialectical movement of the judgment of reflection tells us more about the judgment of reflection than Hegel's introductory remarks. The order of Hegel's exposition of the judgment of reflection is singular, particular, and 'allness.' Hegel replaces 'universality,' the traditional third member of this judgment type, with the term *universelle*. Hegel's reasons for this are clear and illuminating. We will examine them in

their place. But let us now develop our interpretation of the immediate stage of the judgment of reflection – singularity.

The singular judgment can have as its subject either a proper name or 'this x.' One of Hegel's examples of a singular judgment of reflection is 'this instrument is useful.' It is a judgment of reflection because it posits 'this' as in relation to something other than itself through the predicate. The 'this' refers to a singular individual that exists as an empirical entity in relation to another empirical entity. It is this relation that is determined by the predicate. If I say that 'this window is useful,' I situate the window as not only in relation to me but also to my purposes in cooling the room. In this example its usefulness corresponds to its relation to the outside and the inside of the apartment, the temperature, and myself. There is an empirical situation in accordance with which the subject has its value. The situation is the context in which the predicate subsumes the singular subject. Another example Hegel gives is 'this is plant is wholesome.' The situation expressed in the judgment is that the plant is determined in its concrete relation to something other than itself. The plant, of course, is not wholesome for itself – 'wholesomeness' expresses the relation of the plant to someone. If we say, 'this plant is medicinal,' we situate the plant in relation to something in need of healing. The plant is subsumed under those things that are medicinal. This echoes Hegel's comment in his preparatory discussions that identifies the reflective judgment with correlativity and mediation. The determination of the reflective judgment is the mediate because it determines the singular concept as conditioned by the existence of other existents in a world. If we remember that the end of the section on the concept is the singular concept, we can understand the judgment of reflection as the first of two mediate stages in the singular concept's self-division. The judgment of reflection is an advance beyond the judgment of existence because it situates the subject not as an abstract universal in an empirical multiplicity.

The specific passage devoted to the singular judgment is brief and spends more time focusing on its inadequacy, that is, the necessity of its passing into the particular judgment. We should remember that the beginning of the judgment of reflection is the end of the judgment of existence, and is marked by the return of the subject into itself through its absolute noncoincidence with the predicate/universal. One of the most 'positive' determinations of the singular judgment of reflection that the *Science of Logic* provides is the following: 'Now the immediate judgment of reflection is again, the individual is universal – but with the subject and predicate in the stated signification this is an essential universal'

(SL, 72/645). By 'again' Hegel reminds us that the judgment of existence also began with the determination of the individual as universal. Although the judgment of reflection begins like the judgment of existence, there are at least two main differences in the respective immediate stages. First, the judgment of reflection determines the singular as in relation to other existents. The judgment of reflection is the self-dividing of the singular concept into a subject related to other existents. It is in virtue of its relation that it is subsumed under the predicate term. Secondly, the judgment of reflection is an essential determination of the subject. This determination of the self-concept in contrast to the judgment of existence 'says something' about the singular concept that is essential to it. 'The singular judgment can therefore be more precisely expressed as *this is an essential universal*' (SL, 72/645). The universal or predicate that is the relation must be thought of as essential to the singular concept or subject. Instead of the redness of the rose, something must be determined in this judgment that is essential to the subject in being what it is. Instead of the color of a plant, it is its capacity to produce health that is essential. It is not essential to the rose that it be pink – since any object in space can have color. Color is not an essential universal for the plant. But it cannot be something like the categorical judgment of necessity, in which species and genus are the determinate: 'the rose is a plant.' True, the judgment of reflection situates the subject as one of a set of subjects bearing a relation x , just as 'plant' represents that under which the rose is subsumed. The main difference is the emphasis on the empirical. The judgment of reflection is based in an empirical situation. In the *Lectures on Logic*, there is no mention of the 'essential' nature of the relation; it is the empirical relation alone that is the unique characteristic of the judgment of reflection in general. 'Despite the fact that some singular thing is merely something singular it stands connected with something universal, with an external world. Everything that exists is relative. As something existent such a singular thing stands within a relation. "Useful," "dangerous" are such universal predicates. The reflection on what is singular falls within its interconnection' (LL, 174/187). The subjective notion in its development from the judgment of existence to that of reflection moves beyond the abstractness of a singular subject into a relation of an existent to other existents in a world. 'Everything that exists is relative.' The singular subject is now an existent that has a relation to the world: 'This is useful.' The subject could be in this case utilized by someone. This sole emphasis on the relational character of the judgment of reflection is also echoed in paragraph 174 of the *Encyclopedia Logic*: 'In the existent world the

subject ceases to be immediately qualitative, it comes to be in relation and inter-connection with other things – with an external world.' This relation to an external world or an empirical situation is not accidental to the subject. The *Science of Logic* stresses that the relation is only to be understood as an essential one. This follows from the fact that 'everything that exists is relative.' It is an essential relation because it is the determination of an existent. It is the essential relation of the subject term to the world that is developed in the movement of the judgment of reflection. 'But individuality is determined in the judgment of reflection as essential individuality; particularity cannot therefore be a simple, abstract determination, in which the individual would be sublated and the concrete existent destroyed.... The subject is, therefore, these or a particular number of individuals' (SL, 73/645). Particularity as a development of the notion is the moment where the subject becomes itself a multitude. The predicate remains the positing of the subject in an essential relation, but now the subject is no longer an individual, but is a set of individuals. The movement is from a singular individual to a multitude of singular individuals. This only serves to highlight that from which the particular judgment proceeds. To see the becoming 'many' of the subject term, we can see the singular judgment more clearly. The transition from singular to particular is the development of the 'this' from designating a singular individual to the designation of a multitude. Yet there is a slight movement beyond the empirical in the movement to the particular judgment of reflection.

(ii) *Transition to the particular judgment*

The singular judgment is first a development of the concept as singular. Much of Hegel's discussion of the singular judgment is engaged in revealing its inadequacy. 'But a "this" is not an essential universal. This judgment, which, as regards its general form, is simply positive, must be taken negatively' (SL, 72/645). To see the negation in the singular judgment is to recognize the contradiction in it. The singular individual is never really the subject of an essential universal. The universal exceeds the limit of the subject. 'An in-itself of this kind has a more universal existence than merely in a "this"' (SL, 72/645). The singular subject is not a complete determination of the predicate. In other words, there is something implicit in the singular judgment that needs to become explicit. This need for explication is revealed in the contradiction. What is implicit is that there are many subjects that belong under this predicate. This becomes explicit in the particular judgment. Hegel makes the transition to the particular judgment by recognizing the contradiction.

Hegel stresses that the movement of the judgment of reflection is a development of the subject. It is the subject that is altered through the development. The process is through distinct determinations of the subject: singular, particular, allness. But this movement is not abstract and/or one-sided. The subject term is what is explicitly developing, yet the predicate term seems to be that which is developed. 'The negation does not directly affect the predicate which does not inhere but is the in-itself. It is the subject rather that is alterable and awaits determination' (SL, 72/645). The predicate is the constant in accordance with which the development of the subject term transpires. But it is not a simple constant – a mere formal principle of the judgment. The subject alters, but this alteration is oriented to a more exhaustive determination of the predicate. There must be, as Hegel says, an extension of the 'this' to particularity on the basis of the nature of the essential relation posited in the predicate (SL, 73/646). The predicate draws the subject up from the singular to allness. The result of the first stage of the judgment of reflection is the development beyond the singular subject to the particular, from a 'this x' to a 'some x.' The 'some' extends the sphere of the 'useful.' Some plants are wholesome, already extends the sphere of the predicate beyond the singular individual. The explication of the contradiction contained in the singular judgment initiates the dialectic of the reflective judgment. This dialectic is the progressive determination of the essential existence of the universal as the interconnection of existents. The particular judgment follows from the negation implicit in every singular judgment. It is the determination of the notion as something in excess of what can be said about a 'this.'

(iii) *Particular judgment*

The 'singular judgment has its proximate truth in the particular judgment' (SL, 72/645). From the singular judgment emerges the particular judgment. It is the determination of *some* individuals as sharing in an essential relation. A multiplicity of individuals is subsumed under the predicate. 'Some plants are wholesome' emerges from the contradiction of 'this plant is wholesome.' 'The non-individuality of the subject, which must be posited instead of its individuality in the first judgment of reflection, is particularity' (SL, 73/645). By explicating the contradiction, the necessity for the further determination of the subject emerges. The following analysis traces Hegel's exposition of the particular judgment.

(α) *Movement and extension* The development from singular judgment to particular judgment is a movement in the subject term. On the surface

it is clear that the difference between the singular and the particular judgment is the quantifier of the subject term. But at the same time this alteration is an extension of the sphere of the predicate. In the particular judgment the notion is determined as the subsumption of many singular concepts under a predicate indicating essential relation. The extension of the predicate term is altered through the change in the quantifier of the subject term. Extension proper emerges in that there is a multiplicity subsumed under the predicate. This extension does not however 'alter' the predicate. It is the fixed and stable identity over and against which the subject changes from singular to particular. This stability can be seen in two ways. First, the content of the predicate does not change. The predicate term still determines the subject as having value through its relation to other things. Secondly, the form of the particular judgment is still *subsumption*. All of the moments of the judgment of reflection involve the subsumption of the subject term under the predicate. The uniqueness of the particular judgment is that the predicate subsumes a multiplicity or class of individuals: 'Some people don't get it.' Here we see the determination of a field/class of people who don't get it. Only the sphere of the predicate is extended, while the content and form of the judgment are not altered.

We should be cautious in our understanding of the extension proper to the judgment of reflection. We are not giving a determinate count. The extension of the predicate from subsuming one subject to subsuming some is not an 'enumeration.' The particular judgment says 'some people don't get it,' not that 'these 17 people don't get it.' 'Some' remains vague as to the determinate extent of the subject. The multiplicity gathered under the predicate term is indeterminate. The movement from 'this' to 'some' represents the extension of the sphere of the predicate to more than one. The predicate still implies that the subject term has a relation to something empirical through which its value is determined. The subject is a particular multiplicity of empirical existents. The extension of the predicate is constituted through the alteration of the quantifier of the subject term. It is in fact the first moment in which judgment determines a multiplicity. The importance of this is not to be overlooked since it is starting from this 'indeterminate multiplicity' that science is possible.

(β) *Indeterminate extension, allness, and genus* Hegel's account of the particular judgment has two equally important aspects. First, implicit in any determination is the opposite and equivalent determination. Second, the transformation of the quantifier transforms the determinate content of the judgment.

Hegel's first claim is straightforward: 'Some plants are wholesome' implies that 'Some plants are not wholesome.' Both determinations are equivalent as determinations of the extent of a subject class subsumed under the relational predicate. Formally they are equivalent, as they are both instances of subsumption. They are also equivalently indeterminate as to the extent of the subsumption. But they are also indeterminate for another reason: 'The judgment: some men are happy involves the immediate consequence that some men are not happy. If some things are useful, then for this very reason some things are not useful. The positive and negative judgments no longer fall apart; the particular judgment immediately contains both at the same time, just because it is a judgment of reflection. But the particular judgment is, for this reason, indeterminate' (SL, 73/646). The 'indeterminacy' of the particular judgment is rooted in the fact that the opposing determinations are equally determinative of the notion. The determination of the singular concept at this stage of judgment is nullified, suspended, or indeterminate at this stage. This indetermination of the judgment arises by explicating what is implicit in it.

From within the dialectical unfolding of the judgment of reflection, we see that the particular judgment corresponds to the stage of negative reason. The absence of a determination is the result of the explication of what is implicit in the particular judgment itself. Just as the beginning of the particular judgment represents the annulment of the contradiction at the heart of the singular judgment, so does the particular judgment imply a higher determination whereby its indeterminacy is annulled. This is what we can expect of the judgment of 'allness.'

The second aspect Hegel emphasizes is the transformation of content. In the singular judgment, I can say, 'this window is useful.' 'This' indicates a singular empirically given individual. In the particular judgment, I can say, 'some windows are useful,' but I cannot say, 'This windows are useful.' But could I not say, 'these windows are useful'? But this would be to overlook the unique movement Hegel sees in the particular judgment. This uniqueness is emphasized in Hegel's own example. In the singular judgment, we can say, 'Gaius is useful,' but we would not say, 'Some Gaiui are useful' (SL, 73/646). 'To the "some" is therefore added a more universal content, say, men, animals etc' (SL, 73/646). The transformation in the subject term at the level of the quantifier has an impact on the content of the judgment. This impact is an essential characteristic of the particular judgment. 'Some' is distinct from 'these.' 'These' indicates a multiplicity of individuals in the present empirical situation. 'Some' is vague insofar as it indicates a set of empirical individuals that are not

directly present. It extends the field of the predicate to a field of empirical existents that are not necessarily 'present' in the here and now. If I say 'some plants are wholesome' rather than 'this plant is wholesome,' I indicate a relation that holds for individuals that are not present here and now. I suspect Hegel highlights this fact to make clear that already in the movement of the particular judgment there is an intimation of the genus.

(γ) *Development and anticipation* We can compare the particular judgment to the second stage of the judgment of existence. In the negative judgment of existence 'the rose is not red' is implied that the rose is still some particular color. What is implied in the negative judgment of existence is a horizon of possible colors, not another or opposite particular color. This is different from the second stage of the judgment of reflection because implicit in the particular judgment is the claim that 'there exists a set of individuals who are the determinate opposite of the predicate subsuming the subject.' 'The rose is not red' implies that it is colored, but not that the rose is any specific color. True, there is no rose that is colored and not a particular color. My point is merely that what is implicit in the judgment is not which color the rose is, but merely that it is colored. The particular judgment 'some plants are wholesome' implies directly that 'some plants are not wholesome.' It makes a direct claim about a set of existing individuals standing over and against the individuals in the first judgment.

The judgment of reflection overcomes the limits of the judgment of existence because it situates the subject in relation to other existents. The movement from the singular to the particular judgment corresponds to the genesis of the grouping of many existents together in the subject term. Many of a certain kind are gathered together under a predicate term. But this gathering together is equally positive and negative. In the judgment of reflection, the subjective notion becomes determinate as the relation between subject and predicate situated in an empirical world. In the particular judgment, however, this situation of the subjective notion is indeterminate. It thus is not what it was meant to be – a concrete determination of the subjective notion. But it is not that we would annul the indeterminacy by counting up the individuals subsumed under the predicate. It is not through an act of enumeration that we would overcome the indeterminacy of the particular judgment. To go beyond the particular judgment, we gather together all of those things that are essentially related to something else for their value. This concrete result we find in the judgment of 'allness.'

The particular judgment includes within itself an anticipation of the universal judgment. This implies that the adequate conception of the particular judgment recognizes it as (a) the resolution of the contradiction contained within the singular judgment and (b) the anticipation of the final determination of the judgment of reflection, allness. 'More precisely, this universality is also the universal nature or genus man, animal – that universality which is the result of the judgment of reflection, or anticipated; just as the positive judgment, in having the individual for subject, anticipated the determination which is the result of the judgment of existence' (SL, 73–4/646). In the same way as the negative judgment of existence anticipates the singular judgment of existence, the particular judgment of reflection anticipates the judgment of allness. This allows us to recognize the second stage of the dialectic, at least in the discussion of judgment, as also characterized as anticipating the resolution of the movement – negative reason anticipates positive reason. This also allows us to further characterize the indeterminacy of the particular judgment as resolving into allness. The annulment of the indeterminacy of the particular judgment, as a determinateness of the subjective notion, is the recognition of the necessity of the development toward universality.

(iv) The judgment of allness

'Allness' represents the final moment of the unfolding of the judgment of reflection. To understand it, we must grasp it in its context. First, it must be conceived both as the resolution of the particular judgment and as the transition to the categorical judgment. Second, it must be conceived both as the resolution of the reflective judgment as a whole and as a transition to the judgment of necessity. Third, it is the end of the first of the two stages that in the treatment of judgment corresponds to the stage of 'essence'. Additionally, the judgment of allness represents a moment that is the absolute middle of the whole of both the treatment of judgment and the subjective notion. As such, the movement constitutive of the nature of the judgment of allness is very complex. The following gives an account of this movement.

(α) Mere allness The following analyses of the judgment of allness and of the transition to the judgment of necessity will focus on its inadequacy. Hegel himself in presenting the judgment of allness is interested mostly in showing its deficiencies. It is by showing the way in which it fails to give an exhaustive determination of the subjective notion that it is adequately conceived.

As a moment of the judgment of reflection, the predicate represents the essential relatedness of the subject to something other than itself. On the surface, the difference between the judgment of allness and the particular judgment is determined in the subject term: 'All tools are useful.' The subject term is such that there is no possibility of immediate contradiction as there is in the particular judgment – there are not some tools that are not useful. There is in the judgment of allness a reference through the predicate to the subject class as a totality. But how are we to distinguish the judgment of allness from what is conventionally seen as the categorical judgment – all *s* are *p*? Formally, would these two judgments not be identical? Because the subject class in the judgment of allness is the determination of a set of empirical individuals, the claim is always open to the possibility that an individual in the future could stand as an exception. The categorical judgment will not have this possibility. It is the content of the judgment of allness that most clearly distinguishes it from the categorical judgment of necessity.

The content of the judgment of allness determines it as essentially empirical. The quantifier 'allness' implies the 'tentative' claim that a rule applies to all individuals. In the judgment of reflection, the content is 'an extent' of empirically existing individuals. Just as the particular judgment anticipates the predicate as genus, so especially does the judgment of allness: the judgment of allness is *not yet* the categorical judgment of necessity. In fact, what was anticipated as the resolution of the indeterminacy of the particular judgment becomes posited in the judgment of allness. But in being posited, it is explicitly realized that it is contingent upon existing individuals – we sought totality, and found it to be dependent upon the existence of individuals. This is inadequate. The subjective notion passes on to the judgment of necessity seeking a determination that is intrinsically noncontradictory.

The most important statements of the *Science of Logic* on the judgment of allness concern the way in which it foreshadows and gives way to the emergence of the judgment of necessity. 'When universality is pictured merely as allness...' (SL, 75/647). One is tempted to say that the inadequacy of allness is the most important aspect of it. This 'merely' indicates the inadequacy of allness as a form of universality. Allness is insufficient as the universality proper to the notion – it is an incomplete determination. Allness is a fraudulent or *spurious* universality.

(β) *The inadequacies of allness* The inadequacy of the judgment of allness is described by Hegel in two ways. The first and the major inadequacy

of the judgment of allness is the empirical origin of the judgment determination. The second identifies allness with universality from the standpoint of the 'unphilosophical.' These two inadequacies make clear why Hegel refers to the judgment of allness as a spurious determination of the universal notion.

The judgment of reflection as a whole begins and ends with empirically existing individuals. The judgment of reflection begins with the singular individual and subsumes it under a predicate that indicates it has a relation to something else. The relation that the predicate indicates is empirical and external. The essentiality of the relation stays the same since it is the relation that determines the value of the subject. In the transition from singular to particular judgment, only the 'extent' of the subject term is changed. The particular judgment 'some plants are wholesome' rests on the existence of a set of individuals who are representative of a common trait. Yet it also in the quantifier 'some' indicates a transition beyond the individual to an indeterminate class. No future case could contradict a particular judgment, since a plant in the future may be either wholesome or not. One might think, then, that the movement to the determination of allness transcends the empirical starting point of empirical individuals, but this is not the case. It is precisely because the judgment of allness takes the existing individual as its starting point that makes it inadequate as a determination of the universality proper to the notion. It is 'mere' allness. 'Universality, as it appears in the subject of the universal judgment, is the external universality of reflection, *allness*; 'all' means all individuals and in it the individual remains unchanged. This universality is, therefore, only a taking together of independently existing individuals...' (SL, 74/647). Hegel describes allness as an external universality. It is external on the basis of a survey of determinate individuals among which a common trait is identified as belonging to all of them. Yet this common trait is an external relation. The external relation is an empirical situation. The critique of allness is that the totality of this judgment is assembled by taking together a number of individuals – in other words, a multitude becomes one. This common trait that is determinate in the totality is the relation of a number of individuals to other things in relation to which they have a value. 'It is the community of a property which only belongs to them in comparison' (SL, 74/647). The relation to something else is here indicated by claiming it to be the result of comparison. Through the survey of many individuals, one is able to discern a commonality. In the determination of allness, this common property is empirical and essential.

Comparison as an essential characteristic of the judgment of reflection only emerges explicitly in the judgment of allness. However, we can retroactively understand it as included in any and all of the moments of the judgment of reflection. In the particular judgment, it is through comparison or 'external reflection' that a number of individuals are seen to share a property, while others appear to not. In the singular judgment, it is based on experience of something and others that the subject reveals itself as useful. Hegel's question is, how can something universal arise from the external 'gathering' together of empirical individuals? The nature of this question demonstrates Hegel's contention that the inadequacy of the judgment of allness is that it is endlessly open to contradiction. In other words, allness leaves itself always open to an encounter with an individual that is an exception to the rule. The encounter with the exception would nullify the possibility of the allness in question. The universality of allness is tentative or to varying degrees probable. The judgment of allness has as its truth the contingency of its judgment on the already given individuals demonstrating the common trait. This determination of the notion as such is inadequate because it forever remains indeterminate whether in fact the notion is the identity of thought and being. As we have already seen in part two of this chapter, the categorical judgment of necessity represents the becoming determinate of the absolute identity of the Notion in the relation of subject and predicate. This absolute identity is the universal as subsuming all subjects under itself without the threat of the exception. This seems to correspond most exactly to the idea of determinate unity of the actual and the rational. This determinate or posited unity is what emerges in the development beyond the judgment of reflection in general and the judgment of allness specifically.

The second way in which Hegel discusses the inadequacy of the judgment of allness is by reference to unphilosophical thought. In the present context, the 'unphilosophical' designates a specific way of thinking about universals. For this kind of thought, the universal is merely something that is found in a number of individuals: 'It (allness) is...the first thing that occurs to subjective unphilosophical thinking when universality is mentioned. It is given as the obvious reason why a determination is to be regarded as universal that it belongs to a number of things' (SL, 74/647). The unphilosophical way of thinking about the universal considers it as something belonging to individuals and not existing for itself. Additionally the relation of the universal to the individuals is external – their unity as determinations of the universal is only thought

as accidental or secondary. The individuals exist independently of their collective commonality; the determination is not seen as essential. 'But there is, here, a vague awareness of the true universality of the Notion; it is the Notion that forces its way beyond the stubborn individuality to which unphilosophical thinking clings and beyond the externality of its reflection, substituting allness as totality, or rather that being which is categorically in and for-itself' (SL, 75/648). Unphilosophical thought is stubborn and clings to the individual as essential. Because of this commitment it 'substitutes' allness for totality. It claims to know the 'all' of a set of subjects, yet has come to this totality through the enumeration of a quality as belonging to all of the individuals it has encountered in experience. In this way the being in and for itself of the universal remains unthought. A philosophical consideration of this type of universality recognizes the contingency of the universal as such. 'Now an empirically universal proposition...rests on the tacit agreement that if only no contrary instance can be adduced, the plurality of cases shall count as allness; or, that subjective allness, namely those cases which have come to our knowledge, may be taken for objective allness' (SL, 75/648). The universality of allness is always open to the possibility of an exception, and as such can never determine with absolute necessity the totality of a subject class under an individual. This is what the philosophical account of allness recognizes. The determination of allness is described as a 'tacit agreement,' such that if there are further and contradicting evidences produced, we will cease to be able to refer to this plurality with the quantifier 'all.' The unphilosophical does not recognize this contingency, but rather holds stubbornly to the universal as an empirical determination of individuals. Allness is based on a certain regularity of the presence of a determination in individuals of a certain sort, but there is nothing that can be shown to guarantee that this regularity will not be shattered by future evidence. 'For this reason this empirical allness remains a task, something which ought to be done, and which cannot therefore be presented as being' (SL, 75/648). The universality that is determinate in judgments of reflection 'remains a task' because it will always await further confirmation or refutation of its determination of the totality. The unphilosophical individual mistakes this tentative allness for totality proper. Such an individual does not recognize that it has a mistaken conception of the universal. The totality of the judgment of allness is spurious because it is contingent upon the future exhibition of individuals with or without this essential relatedness to others. The refusal to acknowledge its contingency on future individuals is the danger that threatens to make our knowledge of the objective world

fallible. The philosophical view recognizes the contingency of 'allness' on existing individuals, and thus prepares the way for a higher determination of the universal. The higher determination of the universal is unthought in the unphilosophical mode of thinking. The determination of the universal as being in and for itself cannot be recognized in the unphilosophical mode because of its stubborn attachment to its empirical standpoint. In recognizing this inadequacy of the unphilosophical concept of the universal, the way is prepared for the emergence of the first moment of the judgment of necessity: the categorical judgment. In the transition to the judgment of necessity, a new content and form determination emerges that constitutes the progress of the unfolding of judgment in the subjective notion. But this unfolding of the judgment is a moment in the unfolding of the absolute idea. Thought that is philosophical is capable of seeing that the universal is not exhausted by the determination of 'allness' with which the unphilosophical is content. The unphilosophical in its clinging to allness as totality cuts short the natural movement of thought to develop a more complete determination of the idea.

(γ) *Allness: A spurious universality* On the basis of these two inadequacies, we see allness as the vague or partial emergence of the universality of the notion. It is a step beyond the abstract judgments of existence because the universal emerges out of the concrete relations of singular individuals. Yet the judgment of allness is unable to think of this community of individuals as intrinsically or organically related to one another. It cannot recognize the real being of the universal as the intrinsic ground of the individuals. But this inadequacy is proper to the actual content of the judgment of reflection. 'When universality is pictured merely as allness, a universality which is supposed to be exhausted in the individuals as individuals, then this is a relapse into that spurious infinity; or else mere plurality is taken for allness' (SL, 75/647–8). The fruition or terminal point of the judgment of reflection is the revelation of the spurious nature of allness as universality. Allness is the appearance of universality. It is inadequate when taken as an end in itself, that is, as the truth of the universal. It is an incomplete form of the universal, which only the philosophical standpoint recognizes as such. 'We have already in an earlier chapter spoken of the spurious infinity and its illusory nature; the universality of the Notion is the reached beyond. The spurious infinity remains afflicted with the beyond as an unattainable goal, for it remains the mere progress to infinity' (SL, 75/647). The problem with allness is that it cannot ever be complete – there can always be an exception to

the rule. Universality in the judgment of reflection is an incomplete determination. When it is taken as complete, it is the spurious universal. Hegel references his earlier discussion of the spurious infinite. In the Doctrine of Being, Hegel's discussion of the spurious infinite occurs in his discussion of ad infinitum arguments (SL, 236/150). The spurious infinity is conditioned by the finite, which stands over and against it. It is for this reason a finite determination. It appears as the infinite because it resists complete determination. It is never developed as something independent of its not being the finite, that is, it is burdened with the finite (SL, 234/148). This parallels this discussion of the judgment of allness in which the universal is predetermined by its emergence in an open set of existing individuals. By 'open set' I mean to indicate that as an empirical determination of individuals, the universal as the predicate is always contingent upon future individuals confirming or refuting the determination in the judgment. The judgment of necessity will be the concrete and necessary determination of the universal, such that no subsequent evidence is requisite for the truth of its determination to be given. It is a priori necessary that 'all humans are animals.'

The judgment of existence, 'the rose is yellow,' has an empirical content that is yet an abstract or isolated determination of the subject. The universal is not the ground of the subject. The judgment of reflection overcomes the abstract predicate by determining the subject in relation to an empirically existing world. But the determination of the universal cannot overcome the empirical nature of the judgment. Even the judgment of allness is conditioned by empirical individuals, as that out of which the universal emerges. Although the usefulness of something is not strictly an empirical content, since it goes beyond the immediate determinateness of the singular subject, it is still rooted in the precedence of existent individuals as that out of which allness is gathered. As such, the universality of the judgment of reflection is tentative, spurious. The universal is contingent upon the individuals from which it emerges.

(δ) *The end of the judgment of allness as transition to the judgment of necessity* In describing the process of the reflective judgment and the beginning of the judgment of necessity, Hegel remarks that 'The subject has thus stripped off the form determination of the judgment of reflection which passed from this through some to allness; instead of all men we have now to say man' (SL, 76/649). The emergence of the judgment of necessity coincides with the transformation at the level of the content of the judgment. The subject now includes the

quantification within itself. 'Man' signifies the whole of these specific animals – the quantification 'all' is included in the subject term of the necessary judgment. This is the part of the judgment of allness that is preserved in the categorical judgment of necessity.

What is specifically at issue in the movement of the judgment of necessity is the determination of an internal relation between the subject and predicate. This is an advance beyond the judgment of reflection because it relates the subject and predicate not through something else, but through an intrinsic unity. It is thus the determination of the notion as the identity of the subject in the world and a universal that is intrinsically connected with it. 'This intrinsic and explicit connection constitutes the basis of a new judgment, the judgment of necessity' (SL, 77/650). This internal connection marks the determinate universality of the relation between subject and predicate. Because the subject includes the quantifier within itself, the subject has become universal. Unlike the judgment of allness, the categorical judgment does not permit exceptions. It could never be the case that an individual would contradict what is posited in the categorical judgment. This is because the determination that is the intrinsic unity of subject and predicate does not have an empirical standpoint as its basis. The universality is thus not the unphilosophical gathering together of a multiplicity of empirical individuals with a common character; rather, it is the determination of the subject as the universal. This internal connection is marked by a further transformation at the level of content. The intrinsic unity is that of species and genus. We are still dealing with existing individuals because these are contained as presupposed by the judgment of necessity. But our standpoint is not the presence of an individual. The subject extends beyond the here and now of empirical situations.

(v) The judgment of reflection

The judgment of reflection determines the subject as subsumed under a predicate on the basis of its relation to something external to itself. The characteristic of judgments of reflection that distinguishes them from other judgments is the relation posited in the predicate. This is how they are a development from the isolated quality posited in judgments of existence. It is by virtue of the subject's having a relation to something other than itself that it is subsumed under a predicate. The judgment situates the subject in relation to other existent individuals. Explicit in the movement of the judgment of reflection is the development of different 'extents' of subject class subsumed under the predicate. On the surface this is an alteration of the subject quantifier: from

'this,' to 'some,' to 'all.' The form of the relation posited in the judgment is unchanged. Subsumption is the form of the relation of subject and predicate in judgments of reflection, rather than inherence in judgments of existence. Subsumption as the form of judgment is preserved in the judgment of necessity. Thus we can see that the judgment types that correspond to the doctrine of essence are both forms of subsumption. The judgment of reflection is subsumption through external relation, and the judgment of necessity is subsumption through an internal relation. This internal unity of subject and predicate in judgments concerning species and genus is the more developed form of the subjective notion. The movement from subsumption of an external relation to subsumption of internal relation is as a judgment the self-division of the singular concept. The singular concept's self-division into judgment has developed beyond the positing of the abstract relation of a quality to a subject. It has recognized itself in the judgment of reflection as the determinate unity of a multiplicity of singular existents under a predicate. By developing into the judgment of necessity, the singular concept divides itself into the determination of a necessary relation between subject and predicate. In its self-division the subjective notion attains the stage in which the notion itself is determined as true of all empirical existents, but not dependent of them for its truth. It is a genuine universality of which the judgment of necessity is a determination. It is a form of universality that can only be confirmed by experience, since it arises out of the universality that is dependent upon the future existing individuals that can contradict it. The spurious universal is overcome, and the genuine universal arises when the relation of subject and predicate is internal. Instead of the universal emerging out of the comparison of existing individuals, the universal is a determination of the subject by necessity. Necessity as such cannot arise without the recognition of the inadequacy of the spurious universal 'allness.' The subsumption of a subject under a predicate in relation to an empirical world is recognized as universal. The notion is at once in the world and a step above it. It recognizes and determines itself as applying universally to the multitude of empirical individuals. It is true of them necessarily. This level of determination gives rise to the final stage of judgment, the judgment of the notion. It is no longer the determinate subsumption of a subject under a predicate, but has become the determination of the relation the notion has to itself through the situation posited in judgment. Judgments of beauty or goodness determine the nature of the relation between the idea and what is. To say 'this is inadequate' is to posit a relation of what exists to what it ought to be – it posits the relation of what is to the

idea. But it is primarily a determination of the way in which the notion is determined as the identity of idea and what is. 'This is good' makes a determination about whether what exists is in accordance with its idea.

(vi) *Extension and allness*

In anticipation of the conclusion, a few remarks about Hegel's discussion of the judgment of reflection and its relation with Kant's discussion of quantitative judgment are necessary. In Kant's table of judgments, the quantifiers 'this,' 'some,' and 'all' are moments of quantity. All judgments can be analyzed as to their quantity. When we compare the judgment 'some s are p' to the judgment 'all s are p,' we see that the second judgment posits a greater extension of the predicate term. In Kant's lectures, this conceptual extension is articulated in terms concerning the extent to which the sphere of the subject is subsumed under the sphere of the predicate concept. For Kant the universal judgment is the *total* inclusion of the subject class under the predicate. If I say, 'all s are p,' I mean that there is not an s that is not a p. For Hegel, the judgment 'all humans are animals' can be said to have an extension. Yet this quantitative dimension of the judgment is only explicit in the judgment of reflection. In the judgment of necessity, the quantifier is sublated into the unity of the subject – 'humans are animals.' The content 'humans' implies the universality of the 'all.' To highlight the quantity in the judgment of necessity is to miss its determinate essence. We can unpack the quantitative determination sublated within it, but we would at the same time forgo recognition of the judgment of necessity's novelty – the determinate content of species and genus. The sublation of 'allness' into the subject of the judgment of necessity reveals that everything after the judgment of reflection implies a universal subject. Just as the judgment of existence is implied in the judgment of reflection, so the judgment of reflection is implied in the judgment of necessity. The judgment of necessity can be said to have a quantitative determination, yet such a determination is not its specific difference to the other judgment types. It is its specific difference or the unity of its being and essence that is articulated in the *Science of Logic*.

From Hegel's standpoint, to say that every judgment has a quantitative determination is to abstract the judgment from its determination in the context of all knowledge. To abstract the logical moment of judgment from its context is to set it apart from the process in which it has its truth. For Kant, any judgment can be determined in respect to the four headings of the table of judgments, while for Hegel the different determinations of judgment represent four different kinds of judgment. Each judgment

type has its own content and form in Hegel's view, while for Kant any judgment has a quantity, quality, relation, and mode. Hegel's approach to the discussion of judgment exemplifies his radically different method of knowing. This novelty is not, however, to be found in the linear path of Hegel's exposition. Both Hegel and Kant in the exposition of the four kinds of judgment move successively from one type to another. Is there any other way? But the novelty is, for one, that Hegel's method shows every determination of the absolute as both the result and anticipation of forms other than itself. In fact, Hegel's account of any of the judgment types for the most part enumerates the inadequacies of the judgment – positing reasons for the movement beyond it. Kant gives an account of the qualitative determination of judgments and then moves on to the next exposition of the relational. This, Hegel would say, exemplifies an external and mechanical philosophical process. The relational is not a development of the judgment of quality. Hegel's system contains everything in the form of a single exposition. This difference in exposition is a reflection of the new method Hegel deploys in giving an account of logic. This shows us directly, insofar as we believe the methodological shift to follow from certain metaphysical assumption, the connection between Hegel's treatment of logic and his speculative standpoint.

(4) Conclusion: The *Science of Logic* and the judgment of reflection

The novelty of Hegel's approach to the traditional doctrine of logic has been thematic in this chapter. The method, standpoint, and assumptions of the *Science of Logic* are the distinctive traits that distinguish Hegel's 'philosophy of logic' from the tradition. Formal logic is no longer a mere outer courtyard to concrete truth, but rather a moment of the truth itself. As such, formal logic coincides with philosophy proper. In the *Science of Logic*, formal logic is as essential to metaphysics as ontology. Integral to this establishment is the restoration of content and truth to speculative metaphysics. The following gives a brief review of the path to these conclusions and then establishes an interpretation of the relation of Hegel's account of the judgment of reflection to Kant's account of quantitative judgment.

In the *Science of Logic*, reason as the cognition of the unconditioned is not merely a regulative principle ordering our cognition of finite things. The function of reason that Kant had denied a valid content is in Hegel restored a determinate objective content. Yet, this is not to say that Hegel returns to the standpoint of precritical speculative metaphysics. It

is the *Phenomenology of Spirit* that justifies the standpoint of the absolute and thus authenticates the constitutive use of reason in the *Science of Logic*. What Kant had thus denied to the human standpoint is the very standpoint in which the *Phenomenology* culminates, and whose content the *Science of Logic* progressively unfolds.

Based on these and subsidiary arguments, I have developed an analysis of the 'judgment of reflection.' I focus on the judgment of reflection as a concrete way to test whether the future of philosophy Hegel points toward in *Faith and Knowledge* can be said to have come to fruition in the *Science of Logic*. In other words, does Hegel truly overcome the impasses he points out in Kant's philosophy. My understanding of the task that Hegel set for himself in his Jena works is most clearly revealed in his critique and praise of Kant. This criticism and praise centered on the possibility of a speculative philosophy and on an authentic idealism. In the Jena works and in general throughout his career, Hegel sees in Kant on the one hand the germ of authentic idealism, while on the other the failure to develop this germ through to its end. Kant is able to indicate the way beyond the limits of a reflective epistemology, but is unable to systematically establish the properly speculative standpoint. I argued that for Hegel in the Jena works, the reason Kant cannot accomplish this is because he is too tied to the denial of intellectual intuition and thus to the subtraction from speculative reason of any content that is not illusory. If Kant could have become critical of the way in which he conceived the human standpoint, or at least have seen how this conception was the result of the standpoint beyond which his own criticisms pointed, then he could have seen how speculative reason could have a content that was not dogmatic. In Hegel's more mature works, we see the emergence of the dialectic as the concrete way in which the speculative philosophy can achieve its full development without lapsing into dogmatism.

Hegel lets go of the concept of intellectual intuition and replaces it with the dialectic. Again, the dialectic in Kant is merely negative. It reveals that reason in its attempts to think the unconditioned goes beyond the possibility of objective knowledge – it is transcendent. Kant's Transcendental Dialectic excludes speculative reason from the possibility of contributing to our objective picture of the world. Dialectic in Hegel, in contrast, has a positive and absolute content. It is the method of an authentic appreciation of thought itself by itself that allows for the sovereign account of the unconditioned. Such an account is that which Kant could not see as an objectively valid part of the human standpoint. It is the speculative philosophy that articulates in a series

of determinations the nature of the absolute and thus restores to the human standpoint its 'holy of holies.'

But can we see this 'becoming-immanent of the unconditioned' in Hegel's treatment of formal logic? Can we see within the treatment of the subjective notion and its three moments as the effects of this major metaphysical transformation? This was the question we faced in this chapter. As we have seen, formal logic in the *Science of Logic* is one moment in the unfolding of the absolute idea. The method of the unfolding of the idea is the dialectic. Thus it is the method of exposition that should reveal the meaning of the becoming immanent of the unconditioned for the conception of formal logic. It does so by revealing that to understand one part, we must have reference to its place within the whole. The content that is recognized in formal logic is only adequately understood from within the process of the unfolding of the whole. We saw that, first, Hegel's treatment of the traditional logic is the immediate stage of the second volume; it thus represents the beginning of the Subjective Logic. It is also the commencement of the third book, and thus is the immediate stage of the sublation of being and essence; it is the Doctrine of the Notion in its immediacy. Further, it is the immediate stage of the doctrine of notion, the Subjective Notion. The subjective notion is divided into three parts that correspond to the traditional doctrine of logic: concept, judgment, syllogism. The discussion of judgment is the second moment of the subjective notion; it thus represents the dialectical or negative stage in the process of the subjective notion. There are problematically four different kinds of judgments in Hegel's treatment: Existence, Reflection, Necessity, Notion. The discussion of the judgment of reflection is the result of the judgment of existence, and ends in the genesis of the judgment of necessity. It is the second of four stages in the process of the subjective notion self-othering it. Additionally, the judgment of reflection has its own three-part process: the movement begins in the singular judgment, passes to the particular, and terminates in the judgment of allness. Because it is only from within this overall systematic context that an adequate understanding of the content of the judgment of reflection is possible, we see how the method as the progressive determination of the absolute standpoint has its proximate result.

Yet we can still magnify this effect and in it see two further effects. In the *Science of Logic*, the content of judgment changes from the judgment of existence to the judgment of reflection, but also from the judgment of reflection to that of necessity. The content of logic develops through its different moments, which only serves to remind us that what is moving through these stages is the absolute itself. This is an obvious departure

from formal logic. Traditionally an account of the different kinds of judgment is independent of any particular kind of content: one can look first at the quality of a judgment, then the quantity, and so forth. A single judgment can be categorized under each of the headings of judgment. In the *Science of Logic*, each particular kind of judgment has its own particular content. The judgment of existence posits that a simple and abstract determination of empirical origin inheres within the subject. The judgment of reflection has as its content the existence of a subject that is externally and essentially related to something outside of itself in regard to which it receives its determination. The judgment of necessity reveals the substantial and internal connection between the subject and the predicate that the judgment of allness only anticipates. But the content is not the only thing in flux in the unfolding of judgment: the form of the relation between the subject and predicate in each type of judgment is specific and developing. The judgment of existence is where the predicate is said to inhere in the subject, while the judgment of reflection subsumes the subject under the predicate. Hegel describes the becoming of the judgment of necessity as the objective and posited identity of subject and predicate. So both the form and the content are evolving as the treatment of judgment unfolds. We move thus from inherence, to subsumption, to identity. So at the level both of form and content, the dialectical movement of progressive unfolding and self-determination has a significant impact on the novelty of Hegel's treatment of traditional logical doctrine.

Conclusion: Philosophy and the Limits of Logic in Kant and Hegel

In Kant, transcendental philosophy and general and pure logic are two distinct disciplines. They each have distinct modes of exposition, objects, and goals. General logic treats of the rules of cognition independent of any relation to an object – it consists of the rules of thought in general. Logic is composed of a set of determinations that correspond to the form of thinking. Transcendental logic, especially the Transcendental Analytic, concerns the conditions for the possibility of thinking an object. As such, the transcendental philosophy is concerned with the relation of thought to objects given in space and time. Transcendental logic is also formal, but it is the form of thought in relation to an object. If the transcendental logic takes as its task understanding the conditions for the possibility of thought thinking an object given in experience, then it seeks an understanding of the condition for truth itself. For without the possibility of the relation of thought to an object, the material conditions of truth could never be achieved. General and pure logic is considered by Immanuel Kant as laying out the negative conditions for the possibility of truth. Logical validity is a necessary condition for determinate truth, but is insufficient because it has no way to determine the material correspondence of an object to what is thought of it. Although it seems at times that Kant is critical of the correspondence theory of truth, he relies on it in his definitions and descriptions of the relation of general logic to truth. In contrast to logic, geometry cognizes the pure forms of intuition to which all empirical objects must conform if they are to be given in experience. It must adhere to the rules of logic, but beyond this, if it is to be determined as objectively true, it must also conform to the form of a possible experience as well. Through such conformity it can be verified through experience as objectively true or false. Without this it would be useless. Mathematics as a whole has a

relation to the conditions of an object being given in experience, and it is this relation that gives it the sufficient criteria of truth. This is also true of physics. Metaphysics is on Kant's view without a material relation to truth because the objects of metaphysics are beyond possible experience. What physics or mathematics says about the world can be evaluated as to its objective truth or falsity, while metaphysics because its object is outside of the bounds of experience cannot be so determined.

Thus both logic and metaphysics on Kant's view do not tell us anything about the world – they do not add to or amplify our understanding of what is. Logic provides the frame for all statements about the world, while metaphysics makes claims about objects that are beyond the frame of our experience. The transcendental logic, as an analytic of truth, does not make a claim about any particular set of objects. It addresses, rather, the conditions of the possibility of there being an object of thought. It provides the fundamental conditions in accordance to which what can count as a knowledge claim must cohere. It is thus also a frame for our picture of the world. Logic and transcendental logic thus are allies to the extent that neither determines the nature of any specific object, and yet both provide frames for the possibility of such determinations. This alliance is such that I argued in Chapter 4 that the relation between the two logics is isomorphic to the extent that they both have the same end – objective cognition of what is – but the forms of objective cognition they respectively provide are different.

The relation of transcendental logic to general logic becomes difficult to interpret. To a large extent we can treat logic as one of the most important assumptions of the first *Critique*. In fact its relation to the transcendental logic is comparable to the relation of geometry to the transcendental aesthetic. They both act as givens on the basis of which something more primordial about the human standpoint is deduced. One reason for logic's importance follows from Kant's view that, since logic's beginnings in Aristotle, it had not found it necessary to advance at all. Kant sees logic as something complete from the beginning. The fact that the discipline concerned with the rules of mind, the form of thought, had not changed for so long suggests to Kant that something essential about the mind itself had not changed. Kant sees that all the sciences concerned with actual objects are constantly changing and progressing, calling into question certain assumptions, interrogations of foundations, while the merely formal science of logic had remained for the most part the same. There is something unchanging about mind that engages in the scientific explanation of the world. It is this logic that is assumed in Kant's search for the a priori form of the cognition of objects.

Certainly we today in 21st century can talk about changes or advances in logic. It seems that after G. W. F. Hegel, but perhaps not because of Hegel, logic has seen some of the greatest upheavals in the history of all the sciences. The revolution in logic inaugurated by Gottlob Frege is almost as substantial as Albert Einstein's advance beyond Newtonian physics. But for Kant, the form of thought's agreement with its own rules had remained interestingly consistent through history. For Kant, the consistency of logic through time was a valuable clue in his search for a principle by which he could construct his table of categories. If the rules of thought had not changed, the structure of thinking had not changed. What we think about is constantly changing, but that which does the thinking is not. Logic not only represents a clue that there is a universal and unchanging form of thought but it also functions as exemplary insofar as it lends itself to a system. The table of the categories follows from the way that Kant finds to organize the different kinds of judgments. It is upon the basis of this ordering principle that logic is eminent in the construction of the transcendental logic. So not only is logic an outer courtyard for the sciences, it is also a ground from which the a priori structures of cognition can be deduced. It is this 'use' that is primarily the cause of Kant's various departures from the traditional logic. Yet we saw in Chapter 4 that, because logic does not have an object, there is no way to interpret how the conditions of possibility for the cognition of an object can act as a ground for logic. General and pure logic remains ungrounded by the transcendental logic. This suggestion is supported by the fact that logic does not concern synthetic a priori judgments; it is indifferent to the difference of a priori and a posteriori, just as it is indifferent to the difference of analytic and synthetic. The rules general logic studies are so universal that they apply indiscriminately to analytic and synthetic judgments. Logic does not actually make judgments about the world, be they analytic or synthetic, a priori or a posteriori. If logic is not composed of synthetic a priori judgments, its foundation is not secured by the investigations of the *Critique of Pure Reason*. Since for Kant all of the determinate sciences include synthetic a priori judgments, we can understand how something like the axioms of intuition can make comprehensible how quantity in physics or mathematics is possible. But the transcendental analytic does not show how a science of the form of thinking itself is possible, let alone how the quantifiers of judgment are possible. There does not seem to be a direct line from transcendental time determinations to the various logical functions in judgment. Logic remains an ungrounded assumption for Kant's philosophy.

Now in our analysis of Kant's quantitative judgment we noted at least two occasions in which he incorporates concepts from the transcendental philosophy into the logic. We noticed that he does this in order to justify his deviations from the tradition of logic. First, his justification for the inclusion of the singular judgment in the table of judgments refers to the distinct activity of the understanding required for such judgments. Second, Kant brings in concepts from the transcendental philosophy in regard to the formulation of the nature of judgment itself. Kant expresses dissatisfaction with the tradition of logic in its formulation of the nature of judgment and the function of the copula. He invokes the language of the first *Critique* and explicitly the synthetic unity of apperception to give an adequate account of the nature of judgment. The discourse of the transcendental logic encroaches on that of the formal logic, when the tradition of formal logic is being altered.

All of this is only to say that for Kant the relation between logic and transcendental logic is complex and perhaps ultimately problematic. I claimed in the fourth chapter that an interpretation of the relation of the two logics can be said to be isomorphic, intending to mean by this term that ultimately they were (a) oriented toward the same end, that is, determinate science or material relations of truth, and (b) concerned with truth from different sides – general logic as negative touchstone of truth, transcendental logic as an analytic of truth itself. My analysis of this interpretation culminated in the recognition that the fact that there is no science of the inner sense, is immediately connected to the fact that logic does not have an object. This absence of a science of the inner sense is intimately connected to the claim that there is no intellectual intuition. If there were intellectual intuition, the mind would be able to intuit itself, in which case logic as the form of thinking would have content and thus have a sufficient or material relation to truth. But Kant denies the possibility of a science of inner sense and intellectual intuition in the same breath as he takes from reason what he gives to faith, and preserves the boundary between truth and logic. The way in which Kant thinks about logic is intimately connected to the larger project of the critique of speculative reason. This is as much as to suggest that the claim that there is no intuition of an idea of reason is intimately connected with the claim that logic is a propaedeutic to truth. A partial survey of the epistemological situation of the human standpoint reveals that (a) logic is without an object, (b) the mind cannot intuit itself, (c) the ideas of reason cannot be exhibited in intuition, and (d) there is no science of the inner sense, as there is of the outer sense.

In the Jena works, Hegel's reading of Kant is filled with both critique and praise. Hegel praises Kant for recognizing the speculative standpoint. Hegel recognizes this standpoint in the emergence of the form of triplicity in Kant's philosophy. Yet he is critical of the way in which Kant develops, or fails to develop, this standpoint. Kant is unable to fully think triplicity in a systematic way. For Hegel, Kant achieves the speculative standpoint only to fall back into that of reflection, that is, dualisms. Kant remains wed to positions that make the unconditioned/absolute beyond the human standpoint, and the present conditioned appearances that which the human standpoint can claim to know. For Hegel, Kant's standpoint is one of transition. Kant's work signals the end of reflection and the beginning of speculative philosophy. Hegel's ambition is to establish a systematic philosophy that completes the development of the speculative standpoint that Kant only intimated. This standpoint is associated with reason as the capacity to think the unconditioned or absolute that we saw ends up as the concrete unity of opposing and preceding moments. This meant that reason was able to recognize the unity of opposites in a concrete way. In the Jena works, intellectual intuition represented that by which reason has content. The intuition of the intellect was the content of reason as the faculty of the unconditioned. This content is the concrete unity of opposites. Yet this intuition is a result – it is the result of an epistemological process that moves from the simple one-sided posittings of the understanding, through the subsequent negative moment of reflection, to speculation. Thus reason and the intuition of the intellect is a result toward which thought naturally tends. This made clear Hegel's reading of 'cultures of reflection.' The culture of reflection is characterized as turning away from the transition beyond itself to speculative reason. The culture of reflection is defined by this motion that cuts the natural movement of thought off short. The reason Kant remained wedded to the standpoint of reflection is because he was so committed to the critique of speculative metaphysics, which implied the denial of intellectual intuition.

Now, Hegel's emphasis on intellectual intuition as the ultimate content of reason comes to an end in about 1804. This coincides with the departure of Friedrich Wilhelm Joseph Schelling from Jena. As Hegel comes out of the shadow of Schelling, he begins more and more to lay stress on the dialectical method as the means whereby reason has an absolute content. True, the movement we noted in the Jena works from the understanding to reflection to reason is a dialectical movement. But these positions are not yet included in the elaboration of a system. The dialectic becomes the key to understanding the nature of Hegel's mature

philosophical system. It is the dialectical method that is the source of the novelty of the *Science of Logic* and much of his treatment of formal logic. This method follows from the standpoint of reason, in a similar way to how intellectual intuition was the filling up of reason by itself. Intellectual intuition was the intuition of mind itself, and it is this that is in the Jena works the standpoint of reason. In the *Phenomenology* and (perhaps) everything afterward, the dialectic becomes the living content of reason determining itself out of itself. It is this standpoint and method that made the novelty of Hegel's 'philosophy of logic' possible.

The first novelty we noted is that for Hegel, logic has content. Logic is both the negative/formal and positive/material condition for truth for the first time in history. Second, logic and philosophy for the first time coincide without remainder. Logic is no longer the outer courtyard of objective knowledge; it is impossible for philosophy to 'intrude' upon logic – they are one and the same. These two novelties obviously are closely connected. Logic has become a moment in philosophy proper – it has a relation to truth and thus is enfolded within the unfolding of the absolute idea. Metaphysics and logic are both equally an object of reason knowing itself. This connection is made possible through the dialectical method of the *Science of Logic*. But this method is itself the result of a change in standpoint. In other words, it is as if the standpoint of absolute idealism has as its consequence an alteration in the way of doing philosophy, which itself leads to the two novelties we have discussed. Insofar as Kant follows in the tradition of logic, these two novelties represent a radical departure from his conception of logic. Hegel approaches logic from an entirely different standpoint than anyone prior to him, and what are dead bones for the tradition are from his standpoint that in which spirit has life.

Hegel follows Kant in that there are four types of judgment with three subsidiary moments. He follows Kant's systematization of traditional logic. Yet the method of treatment and the content, even the names, of the four types of judgment are radically different. So although we can point to the moments of the judgment of reflection and show how they match up with Kant's quantitative judgment, there is a fundamental difference in the way in which they are articulated that makes the two theories virtually incomparable. Hegel's judgment of reflection, just like Kant's quantitative judgment, has its three moments of universality, particularity, and singularity. The judgment of reflection begins with the determination of the singular concept as in relation to something other than itself. It is in virtue of this relation that it is determined in the judgment as subsumed by the predicate. As a determination of the

singular concept, the judgment of reflection is an expression of what has come before it – it is a further determination of the absolute idea. It is the result of the dialectical unfolding of the concept. Since the essence of the judgment of reflection is determined by its content, there are only certain predicate concepts that can be used in judgments of reflection: usefulness, weight, wholesomeness, and so on. But, as we saw, the same holds true for the subject concept of reflective judgments – it must be an existing, empirically given individual. Each of the four judgment types has its own particular content, that is, ‘this watch is useful’ is not a positive/qualitative judgment. This specific content of the judgment of reflection is the result of the dialectical movement beyond the positive judgment. Hegel’s treatment of the forms of judgment is a continuous movement, a series of passages collectively unfolding an aspect of the absolute. Kant’s discussion of judgment simply states that there are four functions in judgment: quantity, quality, relation, and modality. His discussion of the quantitative function in judgment simply articulates the three types: universal, particular, and singular. Hegel understands Kant’s exposition of the judgment quantifiers to be external, because there is no internal connection between the three moments. But this is precisely because for Kant, logic is not conditioned with any particular content – any judgment can be quantified. ‘This plant is wholesome’ has a quantity just as much as ‘This rose is red.’ For Hegel, these are two distinct kinds of judgment. Hegel’s treatment of reflective judgment moves organically from one moment to the other, developing the content from singular to particular and then to universal. There is an internal order or coherence in the way in which the moment of the judgment of reflection unfolds. And this holds for the entire section on judgment: each type passes into the next, which in turn gives way to the next. In Kant, the movement from one moment to the next seems arbitrary, and Hegel’s critique is that the order of exposition is external to the content. Hegel’s development of the traditional content of logic recognizes a life in the dead bones of logic; it sees the motion of the determination of the absolute as its content.

In Chapter 3, I showed how the principles of the *Analytic of Principles* of the first *Critique* can be understood as internally connected in an ascending order of complexity. I tried to demonstrate how the axioms of intuition make possible the anticipations of perception, which in turn make possible the analogies of experience, and finally the postulates of empirical thought. The principles themselves seem to be articulated in such a way that one moment is the result of the prior and develops into the next. But this is not the case with the table of the logical functions

of judgment. The transcendental philosophy of Kant seems to recognize the necessity of the internal development of the moments into and from one another, yet the discussion of logic is not of the same kind. The boundary between logic and transcendental philosophy seems here to hold firm in Kant's work – the ordering principles of general logic and those of transcendental logic are distinct. The content and the ordering principle of the exposition are distinct. In Hegel, the ordering principle of logic is none other than all the other sovereign determinations of the absolute.

This boundary between philosophy and logic had remained consistent for millennia. It is apparent in Aristotle that the distinction between first philosophy and logic is well enforced. And for as long as logic was seen merely as a propaedeutic to truth, and philosophy the discourse on truth, the boundary remained steadily enforced. This is to say that the boundary remained unchanged in the same way and for the same duration as the discourse on logic had remained the same. In Kant, this boundary is altered, because he reorganizes logic in the name of putting it to a new use – the deduction of the a priori structures of the mind. With Hegel, this boundary is crossed definitively – the dead bones of logic are rejuvenated by spirit. Logic meets the material conditions of truth for the first time in Western history. It has a content of its own as a moment in the unfolding of the absolute. Logic is as much an event of truth as chemistry, geometry, physics, theology, or ontology. Logic becomes an aspect in our picture of the world. But this is only possible once the world has been recognized as the only adequate content of the unconditioned.

In Kant, the regulative function of reason systematizes the cognition of the understanding. It shapes or gives form to our cognition of objects given within the conditions of experience. General and pure logic also frames our picture of the objective world. No cognition can be determined as objectively true or false if it does not already conform to the conditions of validity outlined by formal logic. Transcendental logic and general and pure logic provide frames for our picture of the world. These two frames work together and are isomorphic to the extent that they are different conditions that must be met if our picture of the world is to be intelligible. Yet neither of these logics actually supplies us with determinate knowledge about the world itself – they are finally only frames. In Hegel, the unconditioned is not transcendent of our picture of the world. It is the immanent shape and content of truth. It is identical with the world, and not other than it. The unity of thought and being as it is progressively unfolded in the *Science of Logic* is the

absolute. Hegel's speculative philosophy with its dialectical method is not a frame for the objective picture of the world, but is this world itself. An adequate picture of the world is the one that recognizes this identity. Formal logic is an aspect of this picture. It is a moment in the process of the unfolding of the identity of thought and being, and as such is an aspect of the absolute. It is not a frame of intelligibility, but a moment within intelligibility itself. Reason is also no mere frame or formal condition that contributes nothing to our picture of the world. Reason is the activity of thought systematically unfolding the identity of the world and the absolute. In Hegel, logic and reason are not frames representing the formal conditions of intelligibility. They are both part of the life and movement of an historical and intelligible world.

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